S
333.7
N7ar
2001

a Department of Natural
es and Conservation

Annual Report

STATE DOCUME
NOV 2 1 2001
MONTANA STATE LIBRARY
1515 E. 6th AVE
HELENA, MONTANA 59620

Fiscal Year 2001

MONTANA STATE LIBRARY
3 0864 0015 1095 0

Montana Department of Natural Resources and Conservation

MISSION STATEMENT

To help ensure Montana's land and water resources provide benefits for present and future generations.

GUIDING PRINCIPLES

1. We obey the law.
2. We tell the truth.
3. We follow through on commitments and are accountable for our actions.
4. We believe in being fiscally responsible for the taxpayer's money.
5. We invite the public to participate in our actions and decisions.
6. We provide prompt and courteous service to all our customers.
7. We value and trust one another and strive for a healthy and productive work environment.

Montana Department of Natural Resources and Conservation

Annual Report

Fiscal Year 2001

JULY 1, 2000, TO JUNE 30, 2001

1625 Eleventh Avenue · P.O. Box 201601 · Helena, Montana 59620-1601
Phone 406 444-2074 · Fax 406 444-2684 · www.dnrc.state.mt.us

TABLE OF CONTENTS

Letter from the Director v

Introduction 1
  Department Organization
  Division Duties and Responsibilities
  Financial Information

Centralized Services Division 11

Conservation and Resource Development Division 15
  Montana Agricultural Heritage Program
  Conservation Districts Bureau
  Financial Development Bureau
  Resource Development Bureau

Forestry Division 45
  Fire and Aviation Management
  Service Forestry Programs

Oil and Gas Conservation Division 59
  The Underground Injection Control Program
  Activity Review

Reserved Water Rights Compact Commission 69
  The Compact Commission
  Federal Reserved Water Rights
  Completed Compacts
  Current Negotiations
  Other Reserved Rights

Trust Land Management Division 77
  Overview
  Agriculture and Grazing Management
  Forest Management
  Minerals Management
  Special Use Management

Water Resources Division 97
  State Water Projects
  Water Management
  Water Operations
  Water Rights
  Regional Offices

Appendix A. Funding Information Concerning the Resource Indemnity Tax and the Coal Severance Tax 125

FIGURES

1. Organizational Chart 4
2. Location of Department of Natural Resources and Conservation Offices 8
3. Montana's Conservation Districts 19
4. Allocation of Grant Funds for Conservation District Projects in Fiscal Year 2001 25
5. Resource Conservation and Development Areas in Montana 27
6. Legislative Allocation of Funds for Approved Reclamation and Development Grant Projects 34
7. Legislative Allocation of Funds for Approved Renewable Resource Development Grant Projects 36
8. Number of Fires on State-Protected Land 49
9. Acres Burned on State-Protected Land 49
10. Percentage of Fires, by Cause (5-Year Average) 50
11. Conservation Seedlings: Production vs. Deliveries 54
12. New Hazard Reduction Agreements 57
13. Oil Production by Region in 2000 63
14. Crude Oil Production in Montana (Million Barrels per Year) 1954-2000 64
15. Natural Gas Production in Montana (Million MCF per Year) 1986-2000 65
16. Wells Permitted in 2000 by Region (603 Wells Permitted) 65
17. Location of Federal Reserves in Montana 72
18. Current Land Ownership 79
19. Permanent Fund Balance 80
20. Distribution of Revenues from Common School Trust Land 82
21. Agricultural Revenue 85
22. Grazing Revenue 85
23. Timber Volume Sold 88
24. Timber Revenue Received 88
25. Timber Volume Prepared for Sale 88
26. Total Mineral Revenue by Mineral Type 90
27. Oil and Gas Revenue (excluding Seismic Exploration) 90
28. Coal Royalties 91
29. Special Use Revenue by Source in FY 2001 93
30. Special Use Revenues since FY 1997 93
31. Montana General Adjudication Status as of March 2001 120
A-1. Allocation of Resource Indemnity Tax Proceeds and Interest 128
A-2. Allocation of Coal Severance Tax 131
A-3. Coal Severance Tax Trust Fund Flow of Funds Summary 133

TABLES

1. Department of Natural Resources and Conservation Expenditures and Funding in Fiscal Year 2001 9
2. Montana Agricultural Heritage Grants 18
3. Watershed Planning and Assistance Grants Awarded in FY 2001 21
4. Conservation Education Mini-Grants Awarded in FY 2001 24
5. Conservation District Project Grants Awarded in FY 2001 26
6. Loan Portfolios 29
7. Wastewater Revolving Fund Loans 31
8. Drinking Water Revolving Fund Loans 32
9. Reclamation and Development Grants Approved by the 2001 Legislature (in Order of Their Ranking) 35
10. Renewable Resource Grant and Loan Program Projects Approved by the 2001 Legislature 37
11. Public Loans 41
12. Irrigation Development Grants Issued in FY 2001 44
13. Fire Protection by DNRC in FY 2001 48
14. Development Projects in FY 2001 51
15. Aviation Program Accomplishments in FY 2001 51
16. SEAT Activity 52
17. Nursery Seedling Sales from FY 1997 to FY 2002 53
18. Conservation Seedling Use in FY 2001 54
19. Forest Pest Management Activities in FY 2001 56
20. Forest Practices Activities in FY 2001 57
21. Major Categories of Community Forestry Activities in FY 2001 58
22. Five-Year Summary of Oil Production in Montana 63
23. Summary of 2000 Production and Drilling by County 66
24. Five-Year Summary of Permits and Completions 67
25. Compacts Concluded by the Reserved Water Rights Compact Commission 73
26. Revenue Generated for the Trusts and Permanent Fund Balances in Fiscal Year 2001 80
27. Five-Year Summary of Revenue Generated (by Activity) 84
28. Forest Improvement Activities in FY 2001 87
29. Revenues Received from Minerals in FY 2001 90
30. Special Use Revenues in Fiscal Year 2001 93
31. Dams Managed by the State Water Projects Bureau and Owned by DNRC 99
32. Dams Managed by the State Water Projects Bureau and Owned by DFWP 100
33. Leases Associated with DNRC-Owned Water Projects 101
34. Broadwater-Missouri Power Project in FY 2001 105
35. Water Right Applications in Fiscal Year 2001 121
A-1. Allocation of Coal Severance Tax 131

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

JUDY H. MARTZ, GOVERNOR
1625 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684
PO BOX 201601
HELENA, MONTANA 59620-1601

Dear Reader:

Welcome to the annual report of the Department of Natural Resources and Conservation (DNRC). Our mission is "to help ensure Montana's land and water resources provide benefits for present and future generations." This annual report covers DNRC's programs and the accomplishments that occurred during Fiscal Year 2001 (which ended on June 30, 2001). It was a challenging and extremely productive year for the department.

Some of the highlights from this year's report include the following.

- DNRC worked with other state agencies to provide an informative, one-stop wildland fire information web page.

- DNRC strengthened local grazing management programs by helping sponsor workshops, tours, and demonstration projects including the Governor's Range Tour, the Montana Youth Range Camp, and the Winter Grazing Seminar.

- DNRC conducted and coordinated 112 courses in wildland fire training for 2,916 volunteer and career firefighters in 56 counties. This is an increase of 14 courses and 1,081 firefighters over the previous year.

- The Board of Oil and Gas Conservation issued 603 drilling permits, and environmental assessments were done for each application involving private or state-owned land prior to permit issuance.

- Following almost 15 years of negotiation and technical work by the Reserved Water Rights Compact Commission, the compact negotiated between the State of Montana and the Fort Belknap Indian Community was preliminarily approved by the Fort Belknap Community Council, passed the Montana Legislature, and was signed by the governor in April 2001.

- Over $52 million in earnings and interest from the management of state trust lands was distributed directly to the public schools and other beneficiaries.

- Work continued on a new water rights database, which will improve information gathering and report generation, increase mapping capabilities, and improve customer access and service.

I hope you will find this report both informative and useful. Please let me know how you feel we are doing and what we can do to serve you better.

Sincerely,

Arthur R. Clinch

Arthur R. Clinch
Director

INTRODUCTION

Montana Reserved Water Rights Compact Commission
CARDD
Management of Water Resources
Infrastructure Development and Protection
Appropriation of Water
Providing the most benefit, through the best use, of the state's water resources for the people of Montana.
Water Resources Division
FORESTRY DIVISION
SERVICE FORESTRY PROGRAMS
The Montana Board of Oil & Gas Conservation
Trust Land Management Division
DNRC

PHOTO COURTESY OF TRAVEL MONTANA

INTRODUCTION

"Helping to ensure Montana's land and water resources provide benefits for present and future generations" is the mission of the Montana Department of Natural Resources and Conservation (DNRC).

First established in 1971 as a result of the Executive Reorganization Act of 1971, the department provides leadership in managing the state's natural resources. In 1995 the department was reorganized as part of the reorganization of Montana's natural resource and environmental agencies. It is presently responsible for promoting the stewardship of Montana's water, soil, forest, and rangeland resources and for regulating forest practices and oil and gas exploration and production.

Department Organization

The director of the Department of Natural Resources and Conservation is Arthur R. "Bud" Clinch.

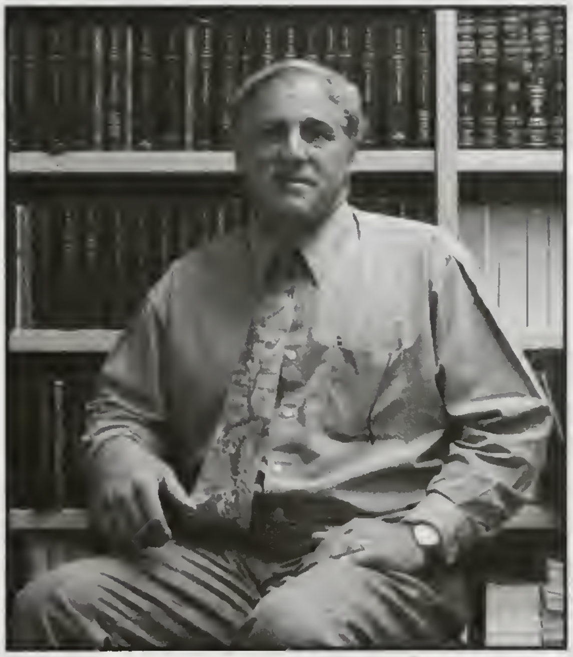


PHOTO BY DAN BUSHNELL

Arthur R. "Bud" Clinch, Department Director

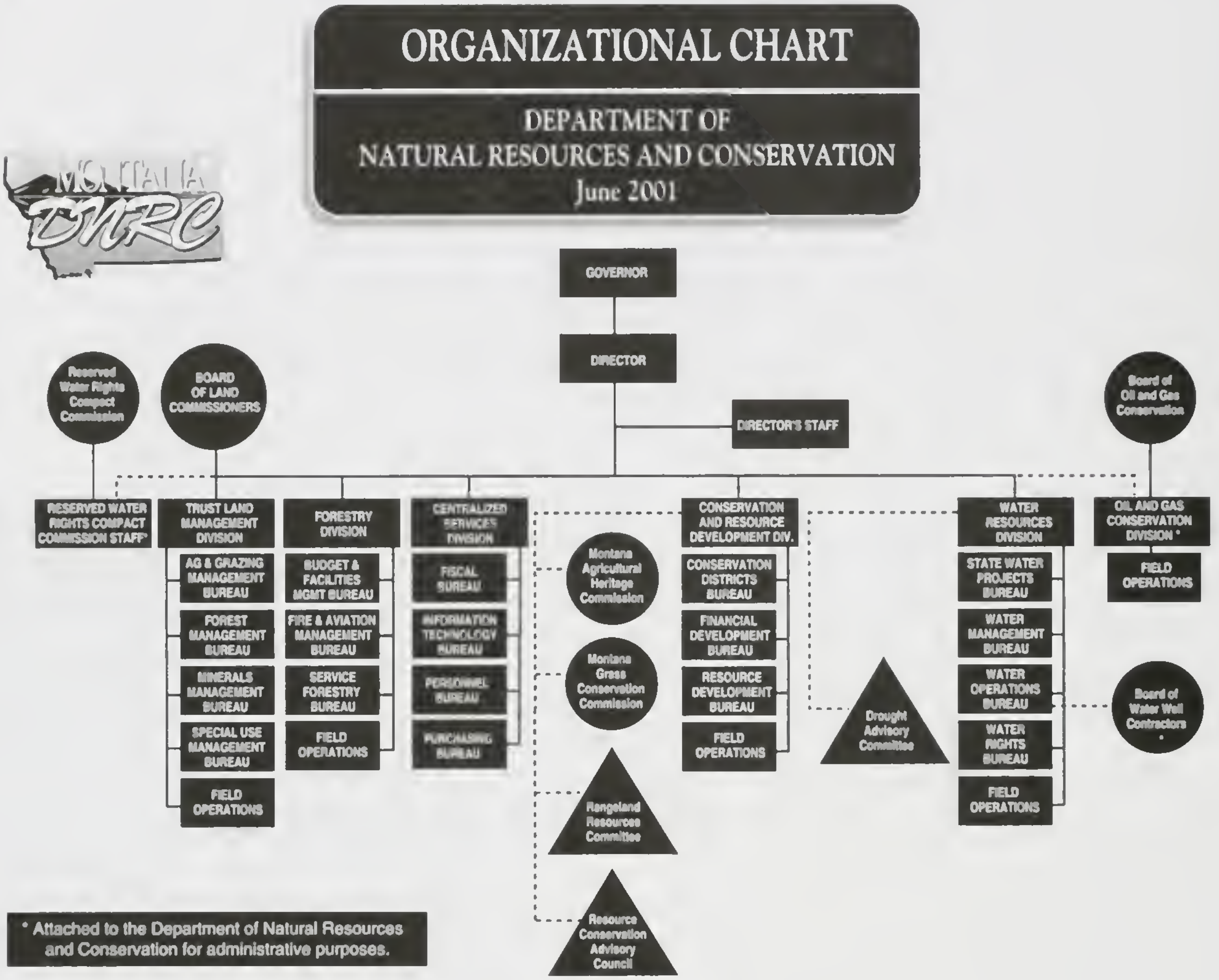
As shown in Figure 1, nine boards and commissions are attached to the department. Six of them — the State Board of Land Commissioners, Reserved Water Rights Compact Commission, Board of Oil and Gas Conservation, Board of Water Well Contractors, Montana Grass Conservation Commission, and Montana Agricultural Heritage Commission — have decision-making authority. The other three — the Resource Conservation Advisory Council, Rangeland Resources Committee, and Drought Advisory Committee — act in an advisory capacity only.

The department is organized into seven divisions:

- Centralized Services Division
- Conservation and Resource Development Division
- Forestry Division
- Oil and Gas Conservation Division
- Reserved Water Rights Compact Commission
- Trust Land Management Division
- Water Resources Division

Two of the divisions — the Oil and Gas Conservation Division and the Reserved Water Rights Compact Commission — are attached to the department for administrative purposes only.

Figure 1



ORGANIZATIONAL CHART

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

June 2001

MONTANA DNRC
GOVERNOR
DIRECTOR
DIRECTOR'S STAFF
Reserved Water Rights Compact Commission
BOARD OF LAND COMMISSIONERS
Board of Oil and Gas Conservation
RESERVED WATER RIGHTS COMPACT COMMISSION STAFF*
TRUST LAND MANAGEMENT DIVISION
AG & GRAZING MANAGEMENT BUREAU
FOREST MANAGEMENT BUREAU
MINERALS MANAGEMENT BUREAU
SPECIAL USE MANAGEMENT BUREAU
FIELD OPERATIONS
FORESTRY DIVISION
BUDGET & FACILITIES MGMT BUREAU
FIRE & AVIATION MANAGEMENT BUREAU
SERVICE FORESTRY BUREAU
FIELD OPERATIONS
CENTRALIZED SERVICES DIVISION
FISCAL BUREAU
INFORMATION TECHNOLOGY BUREAU
PERSONNEL BUREAU
PURCHASING BUREAU
Montana Agricultural Heritage Commission
Montana Grass Conservation Commission
Rangeland Resources Committee
Resource Conservation Advisory Council
CONSERVATION AND RESOURCE DEVELOPMENT DIV.
CONSERVATION DISTRICTS BUREAU
FINANCIAL DEVELOPMENT BUREAU
RESOURCE DEVELOPMENT BUREAU
FIELD OPERATIONS
Drought Advisory Committee
WATER RESOURCES DIVISION
STATE WATER PROJECTS BUREAU
WATER MANAGEMENT BUREAU
WATER OPERATIONS BUREAU
WATER RIGHTS BUREAU
FIELD OPERATIONS
Board of Water Well Contractors *
OIL AND GAS CONSERVATION DIVISION *
FIELD OPERATIONS

* Attached to the Department of Natural Resources and Conservation for administrative purposes.

Division Duties and Responsibilities

PHOTO BY DAN BUSHNELL

Ann Bauchman, Division Administrator

Centralized Services

The Centralized Services Division provides administrative and operational support to all divisions. Support services include financial management, purchasing, data processing, personnel, legal, reception, and mail. The division coordinates information services and prepares publications and graphic materials for printing. Trust revenues are collected and distributed, and ownership records for trust and nontrust lands are maintained.

Conservation and Resource Development

The Conservation and Resource Development Division coordinates, supervises, and provides financial and technical assistance to Montana's 58 conservation districts, and it provides technical, financial, and administrative assistance to public and private entities to complete projects that put renewable resources to work, increase the efficiency with which natural resources are used, or solve recognized environmental problems. The division provides administrative support to the Montana Grass Conservation Commission and the Montana Agricultural Heritage Commission (which is attached to DNRC under a Memorandum of Understanding with the Montana Department of Agriculture). The division receives advice and guidance from two other attached bodies: the Resource Conservation Advisory Council and the Rangeland Resources Committee.

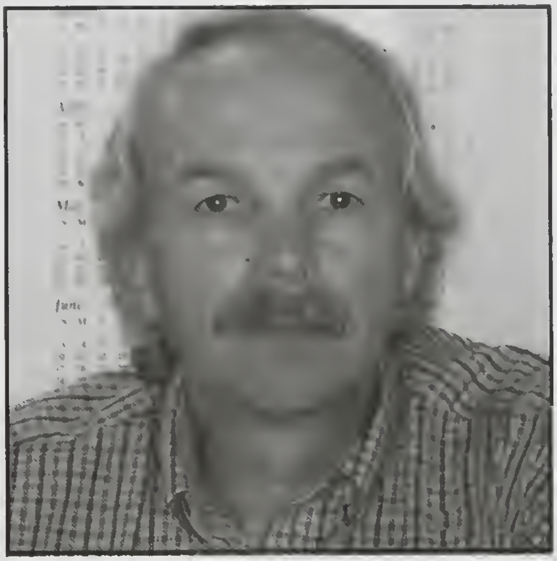


PHOTO BY DAN BUSHNELL

Ray Beck, Division Administrator

Forestry

The Forestry Division protects the state's forested and nonforested watershed lands from wildfire; provides aviation services; operates a nursery and provides shelterbelt, windbreak, wildlife habitat improvement, reclamation, and reforestation plantings on state and private lands; and regulates forest practices and wildfire hazards created by logging or other forest management operations on private lands.

PHOTO BY BROCK STUDIOS

Don Artley, Division Administrator

Oil and Gas Conservation

PHOTO BY GEORGE HUDAK

Tom Richmond, Division Administrator

The Board of Oil and Gas Conservation and its technical support staff are attached to the department for administrative purposes. The quasi-judicial board is comprised of seven members consisting of industry representatives, landowners, and an attorney. They administer Montana's oil and gas laws and the federal Underground Injection Control Program to promote conservation and prevent waste in the recovery of these resources through regulation of oil and gas exploration and production. The board and its staff issue drilling permits; classify wells; establish well spacing units and land pooling orders; inspect drilling, production, and seismic operations; investigate complaints; conduct engineering studies; and collect and maintain complete well data and production information.

Reserved Water Rights Compact Commission

PHOTO BY DAN BUSHNELL

Susan Cottingham, Program Manager

The Reserved Water Rights Compact Commission, which is also administratively attached to the department, was created by the legislature in 1979 as part of the water rights adjudication effort. Commissioners are appointed by the governor, the attorney general, the speaker of the House of Representatives, and the president of the Senate. The nine-member commission and its support staff negotiate water rights with Indian Tribes and federal agencies to establish a formal agreement on the amount of water to be allocated to each interest.

Trust Land Management

The Trust Land Management Division is responsible for managing the surface and mineral resources of forested, grazing, agricultural, and other classified state trust lands to produce revenue for the benefit of Montana's public schools and other endowed institutions. The Board of Land Commissioners oversees the administration of the state trust land in Montana, as directed by the Montana Constitution. This board consists of Montana's top elected officials: the governor, superintendent of public instruction, secretary of state, attorney general, and state auditor.

PHOTO BY DAN BUSHNELL

Monte Mason, Acting Division Administrator

Water Resources

The Water Resources Division is responsible for many programs associated with the uses, development, and protection of Montana's water. The division also develops and recommends water policy to the director, governor, and legislature. The division consists of an administration unit and four bureaus: water management, water rights, state water projects, and water operations. Attached to the Water Operations Bureau is the 6-member Board of Water Well Contractors, a quasi-judicial board that can issue, suspend, or revoke licenses; promulgate rules and regulations; investigate complaints; and hold disciplinary hearings. The 18-member Drought Advisory Committee is also attached to the Water Resources Division.

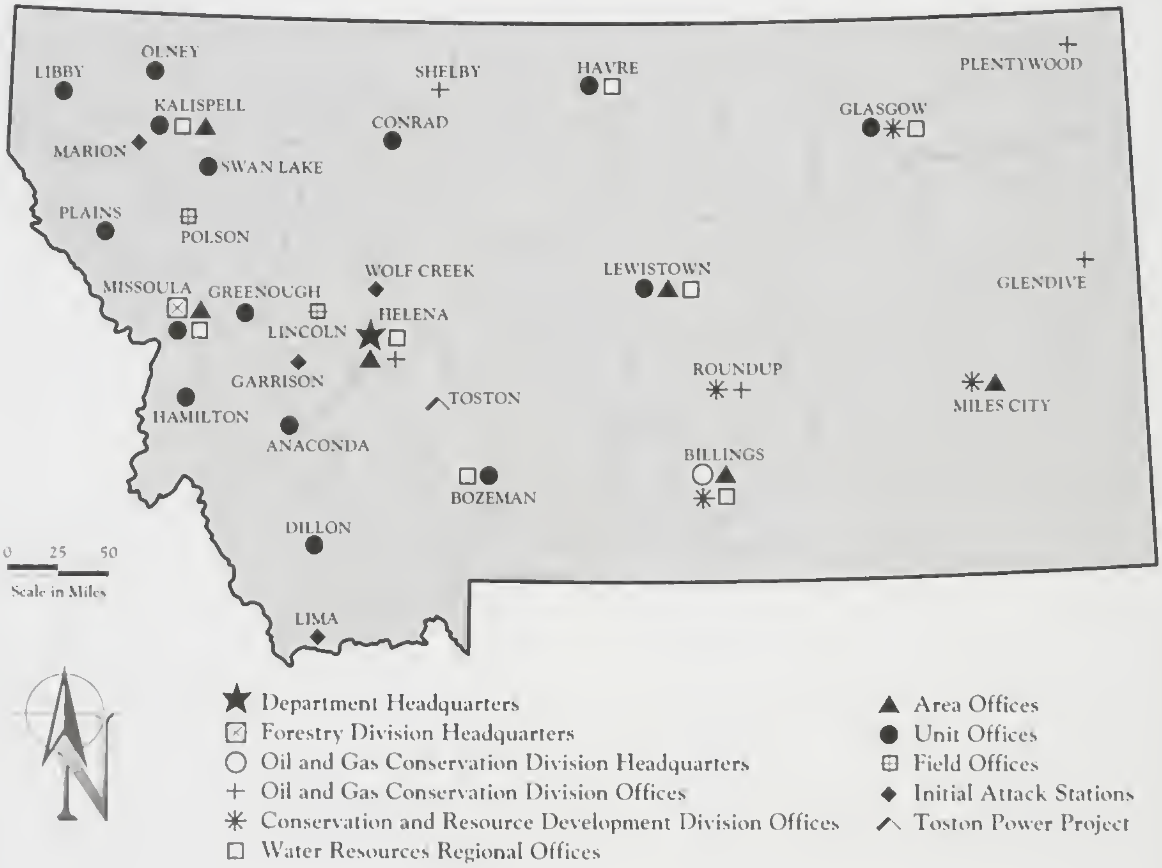
PHOTO BY DAN BUSHNELL

Jack Stults, Division Administrator

Field Offices

Although the department headquarters is located in Helena, the field operations for the department's programs are performed through field offices and personnel located in 28 different communities (see Figure 2). Included are both full time and seasonal employees from the Conservation and Resource Development, Forestry, Oil and Gas Conservation, Trust Land Management, and Water Resources Divisions.

Figure 2
Location of Department of Natural Resources and Conservation Offices



Financial Information

Table 1 presents expenditures and funding of the Department of Natural Resources and Conservation for Fiscal Year (FY) 2001. Information on two of the department's funding sources, the Resource Indemnity Tax and the Coal Severance Tax, can be found in Appendix A.

Table 1
Department of Natural Resources and Conservation
Expenditures and Funding
in Fiscal Year 2001

Category	Budget
EXPENDITURES	
Personal Services	$26,504,953
Operating Expenses	58,353,042
Equipment	536,162
Capital Outlay	1,501
Local Assistance	221,000
Grants	4,410,570
Benefits and Claims	1,500,000
Transfers	355,419
Debt Service	567,946
TOTAL	$92,450,593
FUNDING	
General Fund	$72,120,516
State Special Revenue Fund	16,768,489
Federal Special Revenue Fund	2,524,346
Capital Projects Fund	8
Proprietary Fund	1,037,234
TOTAL	$92,450,593

CENTRALIZED SERVICES DIVISION

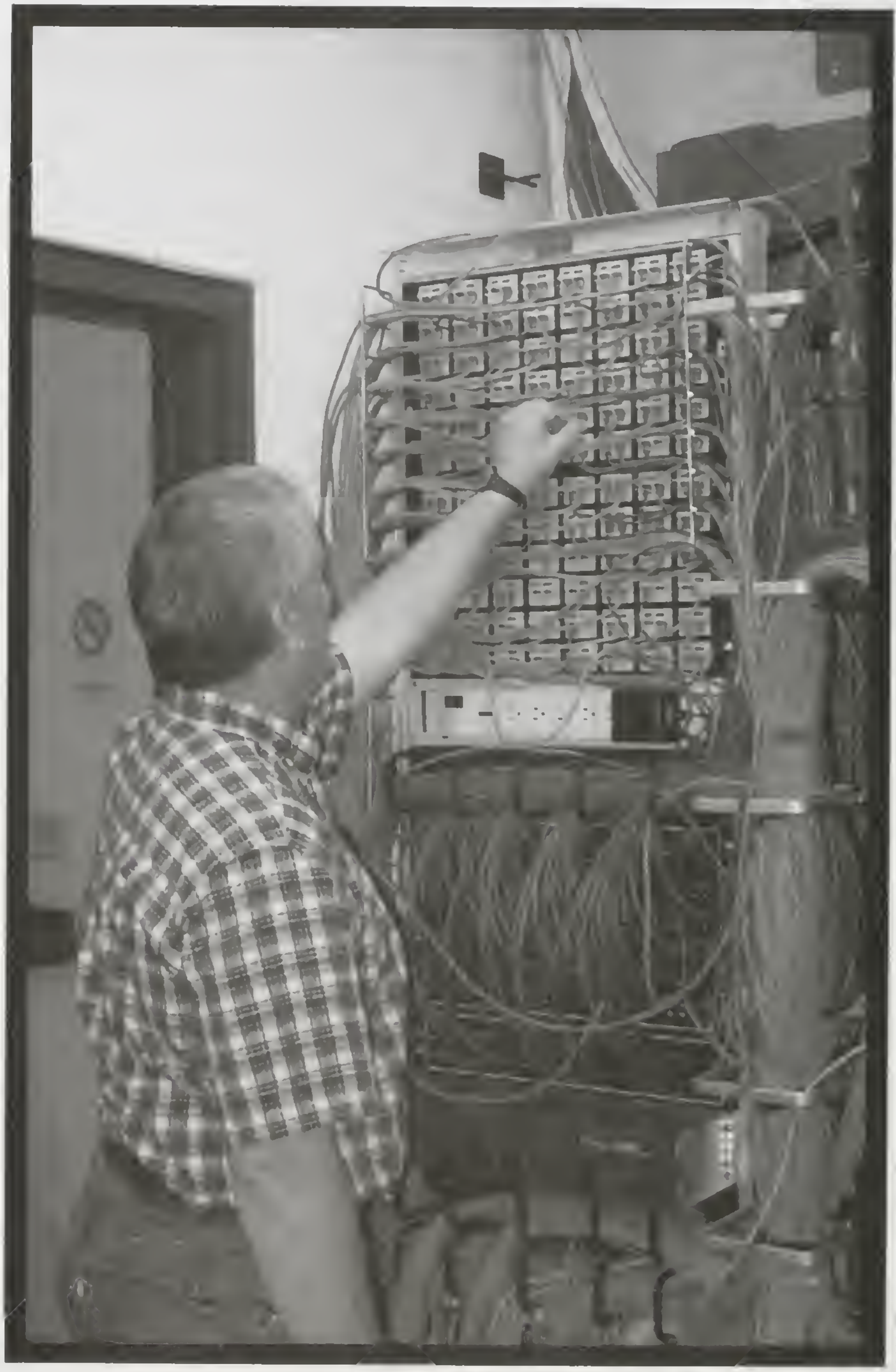


PHOTO BY DAN BUSHNELL

CENTRALIZED SERVICES DIVISION

Provides managerial, administrative support, information, computer, legal, and personnel services to all divisions of the department.

The Centralized Services Division (CSD) provides managerial and legal services to the department through the Director's Office. The division also manages all financial activities, contracting, and procurement; oversees personnel policies and functions; coordinates computer systems; performs public information and media relations tasks; produces publications and graphics materials; and provides general administrative support services. Support services include payroll, data entry, reception, and mail. Fiscal responsibilities include trust revenue collection and distribution, as well as bond and loan accounting.

In Fiscal Year 2001, the division was extremely occupied with vendor payments, emergency firefighter payroll processing, and cash management issues in connection with an unprecedented fire season.

The Personnel Bureau continued to assist managers and employees with various human resource situations, with most of the activity occurring in classification, recruitment and selection, and policy interpretation. Approximately 50 permanent positions were recruited for and filled. Over 100 positions were classified, thanks to a very successful contract with local classification experts. Contracts for classification and for writing position descriptions were renewed for another year, and continued effectiveness and efficiency are expected. High turnover in the Personnel Bureau necessitated filling four of the five positions. The training and development specialist position was filled, and DNRC is beginning to reap the benefits. A new "Increasing Personal Effectiveness" course has been developed for DNRC employees.

The Procurement and Contracting Bureau acted on over 460 requisitions for the procurement of goods and services. The bureau also participated with a variety of field personnel in establishing legal, cost-efficient, and expedient methods to procure urgently needed commodities and services. Over 300 contracts, grants, and amendments (with a total value of over $40.4 million) were reviewed for legal and fiscal compliance, and contractual requirements (such as liability insurance and workers compensation coverage) were monitored. Bureau staff responded to various departmental matters such as risk management and tort claims, the training of other state employees in the use of PeopleSoft software, the Leased Vehicle Program, and the ProCard, which is a credit card for use by state employees. The bureau continues updating the department's purchasing and contracting manual to comply with recent legislative and legal mandates; this manual will be posted on the DNRC website.

In Fiscal Year 2001, the Information Technology Bureau (ITB) continued to migrate DNRC's aging database systems to modern, network-based, client/server platforms. A contract was awarded in March 2001 to a consulting firm to design a new trust land management system. The new water rights system neared completion in FY 2001, with work being performed by a contracted software vendor. ITB staff completed the redesign of the hazard reduction agreement (HRA) system in June 2001.

A new, proactive approach to the DNRC website was implemented in FY 2001. Redesigned screens were implemented throughout the DNRC website. Work was done in conjunction with other state agencies to provide an informative, one-srop wildland fire information web page.

ITB continued to provide the following services to the department: technical writing and editing, printing and publishing coordination, graphic design and layout, public information, website publishing, data entry, digitizing, programming, computer setup and support, computer procurement, networking, and data communications.

Over 22,000 payments were processed during FY 2001 by the Fiscal Bureau, which also coordinated two general obligation bond sales totaling over $9.1 million. Assistance was provided to legislative auditors as they finalized the Fiscal Years 1999/2000 department audit. More than 40,000 checks were received, deposited, and distributed within trust, federal, and state special revenue accounts, with total receipts of over $228 million. The severity of the 2000 fire season taxed the bureau, requiring additional hours and the hiring of temporary staff. Bureau personnel also assisted the field offices with the processing of fire financial information.

CONSERVATION AND RESOURCE DEVELOPMENT DIVISION

PHOTO COURTESY OF U.S. NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION AND RESOURCE DEVELOPMENT DIVISION

Provide technical and financial assistance to local governments, state agencies, and private citizens for the conservation, development, protection, and management of the state's natural resources.

The Conservation and Resource Development Division (CARDD) helps manage natural resources and finances conservation, resource management, and reclamation activities. The division has 23 full-time employees who administer the work of the Conservation Districts Bureau, the Financial Development Bureau, and the Resource Development Bureau. The division also administers the Montana Agricultural Heritage Program.

Montana Agricultural Heritage Program

The 1999 Legislature created the Montana Agricultural Heritage Program to contribute state funding toward the purchase of agricultural conservation easements on family farms, ranches, and forestlands with significant public values. The 2001 Legislature provided no funding for further awards in the next biennium.

The Montana Agricultural Heritage Commission directs the program. This commission is a 12-member citizen council appointed by the governor and the legislature to oversee the distribution of the state funds. Commission members are:

Randy Smith, Glen, Chair
Dennis DeVries, Polson
John Dietrich, Billings
Bob Dompier, Great Falls
Paul Gatzemeier, Billings
Charles Jarecki, Polson
Chris King, Winnett
Thorn Liechty, Evaro
Steve Luebeck, Butte
Ken Maki, Belt
Art Neill, Whitehall
Cecelia Reiner, Bozeman

Table 2 on the next page shows the awards made over the two-year life of the program. The $868,000 in funding awards leveraged over $6.5 million in matching funds from other state, federal, and private sources, including the participating landowners themselves.

Conservation Districts Bureau

Under state law, the Conservation Districts Bureau (CDB) is responsible for assisting Montana's conservation districts and state grazing districts. A conservation district (CD) is a legal subdivision of state government that (1) develops and carries out long-range programs that will conserve and improve soil and water resources within its boundaries, and (2) encourages maximum participation by the general public and all local public and private agencies to fulfill this purpose.

Table 2
Montana Agricultural Heritage Grants

Fiscal Year	County	Special Values	Acreage	Grant Amount	Amount Leveraged
2000	Flathead	Working ranch, scenic river, one of area's larger remaining tracts	1,200	$ 38,000	$ 1,006,000
2000	Gallatin	Working ranch, elk winter range, open space	290	190,000	2,130,000
2000	Powell	Working ranch, scenic river, wetlands	600	160,000	276,128
		FY 2000 Subtotal	2,090	$ 388,000	$ 3,412,128
2001	Flathead	Prairie farmland, crucial wetland and migratory waterfowl habitat	525	$ 79,000	$923,000
2001	Flathead	Prairie farmland, USDA farmland protection dollars (first for Montana)	112	100,000	162,000
2001	Granite and Powell	Working cattle ranch, exceptional fish and wildlife habitat, open space	4,600	135,000	1,028,240
2001	Powell	Working ranch, agricultural operation, conservation of various native wild species and habitat	1,586	36,000	896,800
2001	Sanders	Working farm and ranch, open space for recreation and wildlife habitat	1,010	$ 130,000	$143,000
		FY 2001 Subtotal	7,833	$ 480,000	$ 3,153,040
		PROGRAM TOTAL	9,923	$ 868,000	$ 6,565,168

State law also directs the department, through the Montana Grass Conservation Commission, to supervise and coordinate the formation and operation of grazing districts. Grazing districts are cooperative, nonprofit groups that set up permitting systems to aid in the management of grazing lands where land ownership is intermingled in order to conserve, protect, restore, and properly utilize grass, forage, and range resources. The 1999 Legislature created the Montana Grass Conservation Commission to assume the department's grazing district responsibilities effective July 1, 1999.

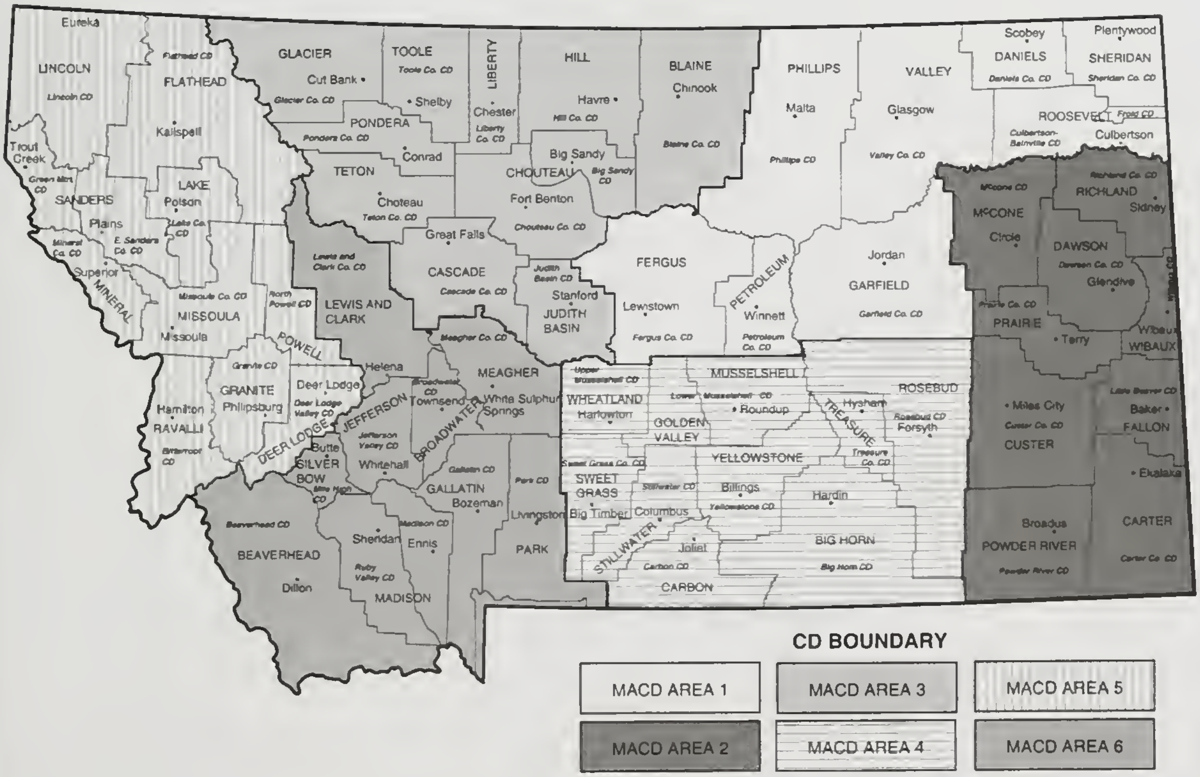
CDB works with the people of Montana on these 10 areas of conservation and resource management.

- Conservation district supervision and assistance
- Watershed efforts and projects
- Rangeland management coordination
- Grazing district supervision and assistance
- Stream protection
- Natural resource conservation education activities
- Riparian management
- Grant and loan programs
- Resource conservation and development (RC&D) areas
- Salinity control

Conservation District Supervision and Assistance

The bureau provides administrative, legal, and financial assistance to Montana's 58 conservation districts (see Figure 3) to help them identify and address local natural resource concerns. Because natural resource challenges are becoming more complex, conservation districts are requiring more complex technical assistance. The 1997 Legislature authorized several programs to provide districts with services and programs needed to carry out their statutory responsibilities effectively. Legal services are provided to conservation districts either through a legal services contract with CDB or by a direct grant. In FY 2001, legal services were used for water reservation issues, contract reviews, 310 advice, and assistance to four conservation districts that are developing a large rural water project in eastern Montana. In addition, legal services were provided to Bitterroot Conservation District in connection with a Supreme Court action pertaining to its administration of the 310 permitting process.

Figure 3. Montana's Conservation Districts



The Resource Conservation Advisory Council (RCAC), which consists of seven members serving at the pleasure of the governor, provides advice and assistance on conservation matters and sets guidelines for CDB's grant programs. Current RCAC members are:

Bob Breipohl	Saco	Representing North Central Montana
Jamie Doggett	White Sulphur Springs	Representing the General Public
Robert Fossum	Richland	Representing Eastern Montana
Marieanne Hanser	Billings	Representing South Central Montana
Vicki McQuire	Eureka	Representing Western Montana
Dave Schwarz	Terry	Representing Conservation Districts
Tom Stelling	Fort Shaw	Representing Conservation Districts

The Conservation Districts Bureau also works with the Montana Association of Conservation Districts (MACD) and the National Association of Conservation Districts (NACD) to address natural resource concerns.

Watershed Efforts and Projects

Through the capacity-building program, conservation districts have identified the need for watershed planning as a high priority goal. Conservation districts, as the local entity responsible for addressing nonpoint source (NPS) water pollution, play a key role in developing local watershed plans. CDB participates on the Watershed Coordinating Council, a group of state and federal agencies and private organizations that coordinates programs in Montana that address aspects of watershed management. CDB also provides technical and financial assistance to conservation districts in support of watershed efforts.

The 1997 Legislature authorized the Watershed Planning Assistance Grant Program. The purpose is to assist conservation districts and affiliated local watershed groups with expenses associated with watershed planning. Funds can be used for the collection of baseline resource information, facilitators, development of a watershed management plan, training, educational efforts, and incidental costs associated with watershed planning.

A total of $150,000 was available for grants in FY 2001. Applications were received from 15 districts for 19 projects. Six of the projects were for resource assessment, and 13 projects funded watershed groups, coordination, and/or coordinators. The resource areas included weeds, water quantity, and water quality. The size of these projects ranges from small watersheds to large basins. The projects funded are listed in Table 3.

The Upper Shields Watershed Group working with Park County CD is an excellent example of a watershed planning and assistance grant project. The funds have been used to write a watershed plan, conduct meetings, and help fund an assessment. The Upper Shields Watershed Group is a recipient of the Montana Watershed Coordinating Council's 2001 Stewardship Award.

Table 3
Watershed Planning and Assistance Grants Awarded in FY 2001

Conservation District	Project	Amount
Beaverhead	Beaverhead River Coordination	$ 10,000
Chouteau County	Missouri River Plan	8,000
Deer Lodge Valley	Little Blackfoot Assessment	3,500
Deer Lodge Valley	Watershed Restoration Plan	30,000
Flathead	Haskill Creek Watershed Group	10,000
Flathead	Swift Creek Watershed Plan	10,000
Hill County	Milk River Video	5,000
Jefferson Valley	Jefferson Watershed Coordinator	3,757
Judith Basin[1]	Judith River/Arrowhead Creek Coordination	5,000
Lake County	Dayton Creek	10,000
Lewis and Clark	Poor Man Scoping	1,408
Lincoln	Kootenai River Network	800
Missoula County	Nine Mile Coordination	10,000
North Powell	Drought Management Plan	7,000
Park	Upper Shields Assessment	10,000
Park	Watershed Coordinator's Assistance	10,000
Park[1]	Yellowstone Watershed Land Use Assessment	2,935
Roosevelt County	Big Muddy Assessment	2,600
Teton	Muddy Creek Study	10,000
	TOTAL	$ 150,000

1. These contracts, which were started in FY 2000, also have funds for work in FY 2001.

Six stream assessments have been conducted by conservation districts throughout Montana in a collaborative effort with the U.S. Natural Resources Conservation Service (NRCS) and DNRC. The assessments include:

- Big Muddy Creek (Sheridan County and Roosevelt County CDs)
- Sage Creek (Liberty County and Hill County CDs)
- Big Sandy Creek (Big Sandy and Hill County CDs)
- Yellowstone River (Yellowstone River Districts Council)
- Deep Creek (Big Hole River Steering Committee)
- Lower Smith River (Cascade County CD)

The purpose of doing these stream assessments is to provide baseline resource information to conservation districts, watershed groups, and local landowners to further their knowledge about the priority streams in their areas and provide a basis for doing voluntary restoration projects, where appropriate.

Rangeland Management Coordination

The Rangeland Resource Program has four major areas of emphasis. They include:

- Working with county range committees, conservation districts, and producer groups to foster sound rangeland management
- Encouraging coordination and cooperation between private, state, and federal entities involved in range management
- Administering the Rangeland Improvement Loan Program
- Co-sponsoring the Governor's Range Tour, Winter Grazing Seminar, and Youth Range Camp

The program receives guidance from the Rangeland Resource Executive Committee, which is composed of six ranchers geographically located across the state and appointed by the governor. Current members include:

Les Gilman, Chair Alder	John Hollenback, Vice-Chair Gold Creek	Bob Anderson Culbertson
Quinn Haughian Terry	Steve Hedstrom Raynesford	Michael Lane Three Forks

In addition, an ad hoc committee of agency and organization personnel serves in an advisory capacity to the executive committee.

CD staff work to strengthen local grazing management programs by helping sponsor workshops, tours, and demonstration projects. Examples of these activities include Monitoring for Success Workshops, the Governor's Range Tour, the Montana Youth Range Camp, and the Winter Grazing Seminar.

A loan program was started in 1979 for the purpose of improving rangelands in Montana. To date, 318 applications have been received for loans totaling $4,222,000. Currently, 51 loans totaling $817,326 are in repayment status. A typical rangeland loan project involves drilling a well and installing underground water lines to supply stock tanks. These stock tanks are usually located in areas where water is insufficient or unsuitable for livestock. The projects are sometimes combined with cross fencing and an overall grazing plan to improve the rangeland. Over 850,000 acres of Montana rangeland have been improved using funds from this program.

Grazing District Supervision and Assistance

State law provides for the creation of cooperative, nonprofit grazing districts and sets up a permitting system that aids in the management of grazing lands where ownership is intermingled. In its administration of the Montana Grass Conservation Act (grazing district law), the Montana Grass Conservation Commission advises, supervises, and coordinates the formation and operation of these grazing districts. Uniform plans that conform with recognized conservation practices are developed for the use of lands within the boundaries of the districts. The 27 state grazing districts represent 1,353 permittees and cover 10,501,070 acres of land.

The commission is composed of these five board members, who are affiliated with local grazing districts.

Bill Loehding, Chair	Ekalaka
Gary Unruh, Vice-Chair	Chinook
Sandra Brown	Terry
Phil Hill	Mosby
Dewayne Ozark	Glasgow

Stream Protection

CDB provides administrative assistance, training, and legal opinions to conservation districts to help them administer the Natural Streambed and Land Preservation Act, commonly referred to as the "310 law." Under this law, any private entity proposing a project that will alter or modify the bed or banks of a stream must obtain a permit.

CDB updated the Joint Stream Permit Application. The process allows applicants to apply for federal, state, and local permits for work in streams and wetlands on a single application form, which is used by the U.S. Army Corps of Engineers, DNRC, the Montana Department of Environmental Quality (DEQ), the Montana Department of Fish, Wildlife and Parks (DFWP), floodplain administrators, and conservation districts. The process makes it easier for applicants to apply for a myriad of permits to do work in Montana's waterways. The application form is available from participating agencies and online.

Other efforts to improve the permitting process include:

- Reprinting the *Guide to Stream Permitting in Montana*
- Continuing development of a project review guide for conservation district supervisors and DFWP biologists
- Final printing of a booklet on the 310 law, administrative rules, and attorney general opinions
- Conducting four workshops on the Natural Streambed and Land Preservation Act for conservation district supervisors (workshops conducted when requested by CDs)

Two firms are under contract to provide engineering reviews of complex 310 projects. Approximately 26 reviews were conducted in FY 2001. Over $80,000 was distributed to 50 conservation districts to offset the costs of administering the 310 law. Another $15,000 was provided to conservation districts along the Yellowstone River to conduct an inventory of structures in the river. The information gathered will be used to evaluate new 310 applications for work in the Yellowstone River. Another $5,000 was provided to various conservation districts to improve their management of the 310 permitting process.

Assistance in developing work plans, writing grant applications, and developing requests for proposals was provided to the Yellowstone River Conservation District Council to begin an assessment of the past and present geomorphology of the Yellowstone River. The council consists of representatives from MACD and from 11 CDs bordering the main stem of the Yellowstone River. It formed with the intention of gathering information and participating in a federal cumulative effects study of the river.

Natural Resource Conservation Education Activities

This program provides grant funding and policy guidance for resource conservation education programs. The bureau assists conservation districts in sponsoring adult education, elementary and secondary school activities, and several annual events: the Envirothon, Youth Range Camp, and Natural Resources Youth Camp. The program goals are to promote discussion of resource issues and provide the knowledge and skills necessary to make decisions regarding the management, protection, and wise use of our natural resources.

CDB administered a grant authorized by the 1999 Legislature to conduct the 2001 Envirothon. The Youth Range Camp operates on donations and other grants.

Conservation Education Mini-Grant Program

Mini-grants of $500 each are available to educators statewide, enabling teachers to develop environmental education projects around local resource issues. The grant program encourages classroom discussion of resource conservation and environmental issues in secondary and elementary schools, by providing financial support for teacher-initiated classroom projects. Through its 11 years, the mini-grant program has funded 230 classroom projects statewide, with $123,664 in grant funds. The 31 mini-grant projects that were funded in FY 2001 for $14,937 are listed in Table 4.

Table 4
Conservation Education Mini-Grants Awarded in FY 2001

Conservation District	Project	Amount
Bitterroot	Teller Wildlife Refuge Field Trip/Workshop	$ 500
Cascade County # 1	Water Quality Testing Equipment, Waders, and PH Tester	500
Cascade County # 2	Continuation of the Ulm Elementary Globe Project	500
Cascade County # 3	Water Quality Testing Supplies for Belt High School	471
Custer County	Atlatl and Darts for Outdoor Workshops	269
Dawson County # 1	Guest Speakers for Noxious Weed Control Seminar	500
Dawson County # 2	Travel Expenses for Envirothon Team	250
Eastern Sanders County	GPS Units and Materials for High School Weather Station	500
Fergus County # 1	Equipment to Install Fergus High School Weather Station at Brewery Flats	500
Fergus County # 2	Water Quality Testing Kits and Supplies for Denton Public Schools	500
Flathead	Student Workbooks for 2001 Family Forestry Expo	500
Gallatin # 1	Facilities, Speakers, and Journals for Yellowstone Ecosystem Trip	500
Gallatin # 2	Field Identification Resource Books	500
Glacier County	Lab Equipment and Video Unit	297
Hill County	Water Quality Testing Equipment	500
Lewis and Clark # 1	Books on Natural Resources for School Library Collection	500
Lewis and Clark # 2	Water Watchers Comic Book for Water Quality District	500
Liberty County	Fertilizer and Fencing Materials for Community Garden/Outdoor Classroom	500
Mile High # 1	Transportation to Sampling Sites on Miscellaneous Creeks	500
Mile High # 2	Reusable Water Quality Lab Equipment and Teaching Materials	1,000[1]
Mile High # 3	Pond Kit for Pond Ecosystem	490
Petroleum County	Equipment and Supplies for Outdoor Classroom	500
Pondera County	Wildflower and Native Plant Books and Seed for Riparian Ecology Outdoor Festival	500
Teton # 1	Supplies for Fire Ecology Field Trip to Pine Butte Swamp Preserve	500
Teton # 2	Educational Materials for Creeks and Critters Outdoor Classroom	500
Toole County # 1	Kits for Use in Alternative Energy Curriculum	465
Toole County # 2	Benton Lake Study	400
Toole County # 3	Water Quality Testing Equipment	400
Valley County	Riparian Outdoor Field Trip	500
Wibaux	Wibaux School Agriculture Education Curriculum	395
Yellowstone	Weed Barrier for the "Grasses of Eastern Montana" Module	500
	TOTAL	$ 14,937

1. $1,000 grant allocated as follows: $500 for kindergarten through 6th grade; $500 for 7th through 12th grades.

Small Acreage Stewardship Education

CDB is working cooperatively with the Montana State University Extension Service and NRCS to create a small acreage stewardship curriculum. The curriculum is being upgraded after a year of pilot workshops. Two modules, "Grazing/Pasture Management" and "Neighboring," are being finalized. Two workshop series using the new curriculum were conducted in Lewis and Clark and Silver Bow Counties. The major benefits of this program are:

- Providing landowners with the tools to manage their property to meet their goals and address resource concerns
- Giving local resource agencies an opportunity to contact and develop working relationships with small acreage owners

The bureau continues coordinating with other states to produce curricula and materials to address the issue of small acreage stewardship and development.

Riparian Management

Proper management of riparian areas is critical to maintaining water quality, stream bank stability, and flood control. Since 1988, the bureau has coordinated a comprehensive riparian management program involving conservation districts, federal and state agencies, and private organizations. The purpose of the program is to promote proper riparian management by emphasizing the economic, ecological, and hydrological benefits of these areas to landowners.

Program efforts for FY 2001 included:

- Providing 34 riparian contracts to 23 conservation districts
- Reprinting 5,000 copies of *A Guide to Stream Permitting in Montana*
- Partially funding an 8,000-copy reprint of *Winter Grazing Successes on Montana Ranches*
- Printing and distributing 10,000 copies of the *2001 Agricultural Riparian and Wetlands Calendar*

Grants were received and private funds raised to pay for some of these projects.

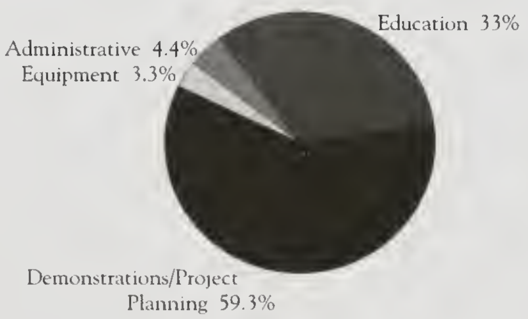
Grant Programs

The bureau administers four grant programs. The Conservation Education Mini-Grants and the Watershed Planning Assistance Grants were discussed earlier in this chapter.

Conservation District Project Grants

The Conservation District Project Grant Program provided $300,000 in FY 2001 from coal severance tax funds for natural-resource-related projects and activities. Funds are used to correct stream bank erosion and sedimentation problems; demonstrate new technology; and conduct soil and water conservation

Figure 4
Allocation of Grant Funds for
Conservation District Projects in Fiscal Year 2001



projects, youth and adult educational activities, and equipment rental programs. All projects funded in FY 2001 are listed in Table 5, and the allocation of funds is shown in Figure 4.

Table 5
Conservation District Project Grants Awarded in FY 2001

Conservation District	Project	Amount
Beaverhead # 1	Winter Grazing Seminar 2001	$ 1,572
Beaverhead # 2	Van Kamp Slough Project	3,000
Bitterroot # 1	Dairy Waste Management	10,000
Bitterroot # 2	Fire Reclamation	30,000
Broadwater	Big Springs Ditch Repair # 2	5,000
Cascade County # 1	Grazing and Range Workshop	1,930
Cascade County # 2	Sun River Bank Stabilization	10,000
Cascade County # 3	Emergency Stock Well	13,353
Cascade County # 4	Missouri River CD Council	8,000
Conservation Districts Bureau	Mini-Grants	14,937
Custer County # 1	Montana Conservation Trees Book	4,100
Custer County # 2	Yellowstone River CD Council	9,757
Deer Lodge Valley	Watershed Restoration	14,789
Eastern Sanders	Aerator Purchase	10,000
Gallatin County # 1	Concrete Block Diversion # 2	1,240
Gallatin County # 2	Youth Range Camp 2001	6,500
Gallatin County # 3	Composting and Manure Management	5,250
Granite	Drummond School Playground	10,000
Jefferson Valley # 1	Boulder Hot Springs Lagoon	5,000
Jefferson Valley # 2	Jefferson River Coordinator	7,000
Lake County # 1	East Post Creek Project	2,545
Lake County # 2	Wetland Mitigation	952
Lake County # 3	Environmental Assessment for Weed Management in Lake County	10,000
Lake County # 4	AgriMet Irrigation Scheduling	7,400
Lewis and Clark # 1	Weed Calendar 2001	5,000
Lewis and Clark # 2	Fire Rehabilitation	2,500
Lewis and Clark # 3	Menlo Park Restoration	3,837
Liberty County	Grant Writing Workshop	3,685
Lincoln	All Terrain Vehicle Logging Equipment	5,200
Lower Musselshell	Native Landscape Brochure	9,900
Meagher County	Smith River Hydrology Study	10,000
Missoula County	Landowner Workshop	5,500
Park # 1	Upper Shields Mapping Project	2,000
Park # 2	Governor's Task Force River Study	6,500
Prairie	Irrigation/Coal Bed Methane Study	2,865
Roosevelt County	Dry Prairie Rural Water District Administration	15,000
Stillwater # 1	Livestock Mineral Study	15,000
Stillwater # 2	Governor's Range Tour	1,510
Teton County	Groundwater Investigation	10,000
Valley County	Badlands Range Monitoring	5,000
Various CDs	Supervisor Travel	4,178
	TOTAL	$ 300,000

Administrative Grants

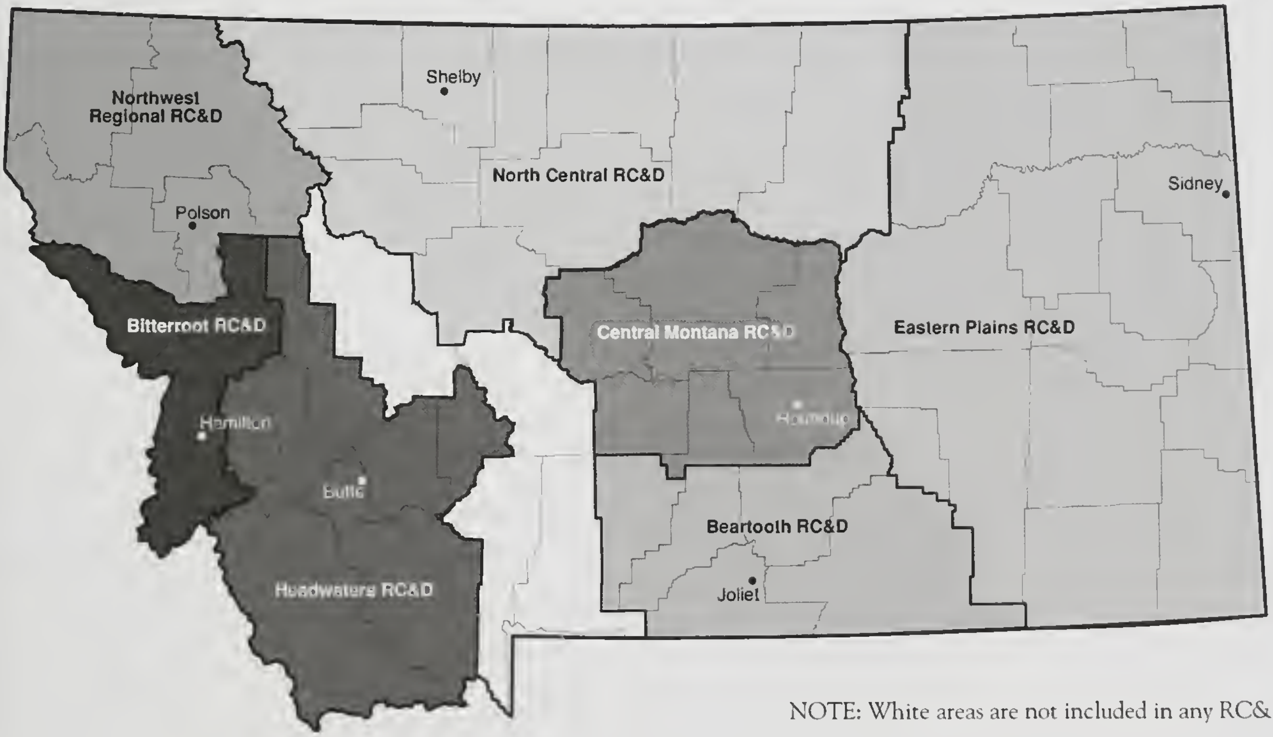
The bureau receives $225,000 per year from the General Fund and the Coal Tax Fund for grants to districts whose county mill levies are inadequate to support district operations. These grant funds are for administrative purposes only and are used for administrative salaries and office-related expenses. In FY 2001, grants were awarded to 43 CDs.

Information on the Coal Severance Tax and the Resource Indemnity Tax (RIT) is presented in Appendix A.

Resource Conservation and Development Areas

In a cooperative effort with NRCS, the bureau has taken a lead role in assisting in activities of the NRCS partnership coordinator and the Central Montana RC&D Area. The partnership coordinator is currently helping develop key issues and providing direct assistance to the RC&Ds in Montana (see Figure 5).

Figure 5
Resource Conservation and Development Areas in Montana



NOTE: White areas are not included in any RC&D.

The Central Montana RC&D was involved in the following activities.

- Participated as a member of the Statewide Task Force for Home Ownership Network; implemented statewide home ownership status reporting system
- Provided first-time homebuyers' training to 42 students
- Arranged financing and provided project management for foundation renovation project (50-unit low-income apartment complex)

- Wrote legislation and facilitated passage of abandoned building tax incentive statute (House Bill 351)
- Organized communities (four counties) and wrote prefeasibility funding request for six-community regional municipal water project
- Assisted with Economic Development Administration (EDA) planning grant request for Snowy Mountain Development Corporation
- Assisted incorporation and staffing of Snowy Mountain Development Corporation; completed required Comprehensive Economic Development Strategy for EDA District
- Served as advisor to the Lower Musselshell Total Maximum Daily Load (TMDL) Advisory Group
- Created six-county inventory (database) of available unused commercial property (for certified cities, House Bill 351 tax incentive initiative, and growth policy)
- Began prefeasibility assessment for Stafford Dam Rehabilitation Project
- Conducted first of two formal, community-wide outdoor recreation surveys
- Participated as a member of the Custer Country Tourism Committee

The bureau also administers a $50,000 appropriation for the Community Project Startup Grant Program, which is delivered through the Eastern Plains RC&D. The RC&D approved seven grants totaling $25,000 in FY 2001.

Salinity Control

The Montana Salinity Control Association (MSCA) is a group of conservation districts established to reclaim and prevent saline seeps and agriculturally-caused water quality problems, on an individual farm and/or watershed basis. MSCA originated in 1979 in 9 counties and now serves 34. MSCA is partially funded from mineral taxes administered by CARDD. Through the Conservation Districts Bureau, MSCA received $225,000 in FY 2001. Additional funding comes from landowner and user fees for projects. Outside funding has been derived since 1983.

Conservative estimates indicate that over 300,000 acres in Montana are affected by salinity problems. MSCA has developed individual reclamation plans for 795 sites on 102,647 acres to address 12,920 salinized acres that were no longer productive. Nine salinity-based watershed projects, ranging in size from 4,000 to 625,000 acres, are in progress or completed. Significant planning has been done and will continue in these watershed projects. These acres are not reflected in the total, but will be reported at a later date. Each watershed project has a local advisory group that contributes funds and provides coordination between landowners and technical agencies. CDB is involved in the organization of individual and area watershed projects through local conservation districts.

MSCA coordinates with state and federal agencies to utilize and adapt their technical assistance and funding programs to address nonpoint source pollution and other resource concerns. In addition, MSCA has a strong relationship with Canadian provincial salinity specialists to share information through the Prairie Salinity Network. Similar cooperation has been established over the years through Australian research and landowner groups.

Financial Development Bureau

The Financial Development Bureau is responsible for preparing and managing the cash flow of the division's programs. The bureau also issues loans to borrowers and manages the financial administration of Montana's Water Pollution Control State Revolving Fund (WPCSRF) and Drinking Water State Revolving Fund (DWSRF) Loan Programs. The functions of the bureau include:

- Issuing general obligation bonds
- Issuing coal tax bonds
- Monitoring the operating budget of the division
- Preparing cash flows
    - Water Pollution Control Program
    - Drinking Water Program
    - Reclamation and Development Grants Program
    - Renewable Resource Grant and Loan Program
- Monitoring financial statements of public borrowers
- Monitoring arbitrage calculations for all DNRC bonds
- Administering loans made to public entities

With the passage of the WPCSRF and DWSRF legislation, the volume of work dictated the formation of the Financial Development Bureau. The loan portfolios alone have grown to over $180 million (see Table 6).

Table 6
Loan Portfolios

Type of Loan	Amount
Coal Tax Loans	$46,830,000
Water Pollution Control Loans	92,837,000
Drinking Water Loans	43,179,000
TOTAL	$ 182,846,000

The disbursements to grantees can be as much as $5 million per year. Approximately 750 to 1,000 contracts are outstanding at any one time. The financial expenditures on each contract are tracked separately. Cash flows are produced on a monthly basis. For the revolving fund programs, investments must be made for repayment funds in the program.

Bond sales are planned to meet the construction schedules of the borrowers. On the average, $5 million to $10 million in bonds are issued each year. In FY 2001, over $15 million in bonds were issued. Loan disbursements were over $38 million in FY 2001.

State Water Pollution Control Revolving Fund Loans

The Water Pollution Control SRF was created by the 1989 Legislature. It is designed to combine federal grant money with state matching money to create a low-interest loan program that funds community wastewater treatment projects. DNRC and DEQ co-administer the SRF program. The U.S. Environmental Protection Agency (EPA) makes a grant of federal funds to the state. The state must match 20 percent of that grant. The state's share is derived from the sale of state general obligation bonds. Loans are made by DNRC to public entities at an interest rate of 4 percent for 20 years.

Since the program started, the State of Montana has issued $17.1 million in general obligation bonds, and EPA has contributed $75.7 million in grants, which accounts for the $92.8 million program level. Seventeen loans were closed in the 2001 construction season for a total of $24 million. The 1997 Legislature authorized this program to start financing landfills for small communities effective July 1, 1997, but no landfill loans have been made to date. See Table 7 for a listing of current loans. The program expects to make loans of $15 million in FY 2002.

The City of Belgrade borrowed $1,058,000 at 4 percent interest in 2001 for Phase I of a two-phase project. Phase I puts mechanical surface aerators into four existing lagoons and constructs two sets of six-cell percolator basins. New treatment and storage cells will be constructed in Phase II.

Also in FY 2001, the Town of Kevin borrowed $47,000 for engineering, and for purchasing and installing an influent flow meter. This will help the town prepare to update its wastewater facility in the next year. This community demonstrated a hardship and received a 3 percent interest rate.

Table 7
Wastewater Revolving Fund Loans

Loans Completed	Amount	Loans Completed	Amount
Belgrade	$ 1,058,000	Manhattan	$ 636,000
Big Sky # 1	5,513,000	Missoula	
Big Sky # 2	417,000	California Street	502,000
Big Timber	389,000	Mullan Road	1,820,000
Bigfork	1,000,000	NW Broadway	943,000
Butte-Silver Bow	5,307,390	Pineview SID	658,000
Cascade # 1	202,000	Rattlesnake	304,000
Cascade # 2	1,218,000	Reserve Interceptor	537,000
Colstrip	300,000	Reserve/Pineview	718,000
Columbia Falls	2,650,000	Reserve Street	2,221,000
Columbus	1,540,000	Reserve Street SID	2,671,000
Conrad	734,000	Special Improvement District # 520	2,634,000
Corvallis	235,000	Wapikiya/Bellevue Add-on	324,000
Cut Bank # 1	531,000	Wapikiya/Bellevue Clarifier # 1	2,465,000
Cut Bank # 2	800,000	Wapikiya/Bellevue Clarifier # 2	1,177,000
Darby	111,000	Missoula County	
Denton # 1	55,000	Linda Vista # 1	241,000
Denton # 3	139,000	Linda Vista # 2	1,943,000
Dillon	2,065,000	Park County # 1	378,000
East Helena	91,000	Park County # 2	83,000
Flathead County		Red Lodge # 1	390,000
Bigfork	424,000	Red Lodge # 2	3,934,000
Evergreen # 1	3,600,000	Resource Development Bureau , DNRC	
Evergreen # 2	700,000	Nonpoint Source # 1	1,500,000
Forsyth	1,400,000	Nonpoint Source # 2	1,750,000
Fort Benton	1,177,000	Nonpoint Source # 3	2,000,000
Glasgow # 1	402,000	Nonpoint Source # 4	2,225,000
Glasgow # 2	1,048,000	River Rock Water and Sewer District	3,100,000
Glasgow # 3	778,000	Ronan	620,000
Glasgow # 4	252,000	Saint Marie (Glasgow)	150,000
Glendive # 1	236,000	Shelby	481,000
Glendive # 2	376,000	Superior	82,000
Harlowton	777,000	Townsend	1,071,000
Harrison Water and Sewer District	322,000	Troy	1,817,000
Havre	2,161,000	Valier # 1	200,000
Helena	9,320,000	Valier # 2	19,000
Hot Springs	200,000	Vaughn — Cascade	248,000
Kalispell	3,913,000	Victor	300,000
Kessler School	185,000	Wolf Point	453,000
Kevin	47,000	Worden — Ballantine	260,000
Lincoln/Lewis and Clark Sewer District	309,000		
		TOTAL	$92,837,390

Drinking Water State Revolving Fund Loans

This program provides funds for training, technical assistance, and the issuance of low interest loans to local governmental entities to finance drinking water facilities and implement the Safe Drinking Water Act. State enabling legislation was passed in 1995 and amended in 1997, after the U.S. Congress passed federal enabling legislation in August 1996. DNRC and DEQ co-administer the Drinking Water Program. The two agencies applied for the federal funds in January 1998. The state has issued $9 million in general obligation bonds, EPA has obligated $25 million, and $9 million in recycled funds have also been used to fund loans. The outstanding loans total $43 million (see Table 8).

Table 8
Drinking Water Revolving Fund Loans

Loans Completed	Amount
Boulder	$ 1,294,000
Broadview	203,000
Brockton	45,000
Cascade	130,000
Colstrip	563,000
Columbia Falls	907,000
Conrad	650,000
Cut Bank # 1	283,000
Cut Bank # 2	576,000
East Helena # 1	228,000
East Helena # 2	3,234,000
Elk Meadows	200,000
Ennis	60,000
Fort Peck Water and Sewer District	1,520,000
Glendive	1,829,000
Great Falls	3,000,000
Havre # 1	600,000
Havre # 2	8,401,000
Kalispell	761,000
Lakeside	400,000
Laurel	5,250,000
Lockwood Water and Sewer District	1,700,000
Missoula County Fairgrounds	233,000
Missoula County Sunset West	291,000
Philipsburg	200,000
Plentywood	577,000
River Rock Water and Sewer District	2,100,000
Seeley Lake	1,340,000
Twin Bridges	300,000
Virginia City	66,000
Whitefish # 1	400,000
Whitefish # 2	5,839,000
TOTAL	$ 43,180,000

Eleven loans were closed in FY 2001 for $11 million. One of those loans was to Fort Peck Water and Sewer District. The project loan was for $1.5 million at 4 percent. The project consisted of constructing a new treatment system and collection line. This system brings water to homes where owners previously had to haul their water.

The Town of Boulder borrowed just over $1 million dollars at 4 percent interest. This project consisted of new treatment equipment that will resist corrosion and 30,000 feet of new distribution main.

These projects continue to improve the communities that participate in the loan programs. The loan interest rate also helps to make the projects affordable. No loans are made over the 4 percent interest rate. DNRC projects that $10 million in drinking water loans will be made to communities in Montana in FY 2002.

Resource Development Bureau

The Resource Development Bureau (RDB) administers several grant and loan programs and provides assistance to conservation districts for the administration of water reservations and to assist landowners to develop new irrigation. The programs include:

- Reclamation and Development Grants Program
- Renewable Resource Grant and Loan Program
    - Public Grants
    - Project Planning Grants
    - Emergency Grants
    - Private Grants
    - Private Loans
    - Public Loans
- Treasure State Endowment Loan Program
- Conservation District Water Reservations
- Irrigation Development Program

FY 2001 was a successful year for these programs. Over 156 contracts were being actively administered, and approximately $13 million in grant and loan funds was disbursed for projects throughout the state.

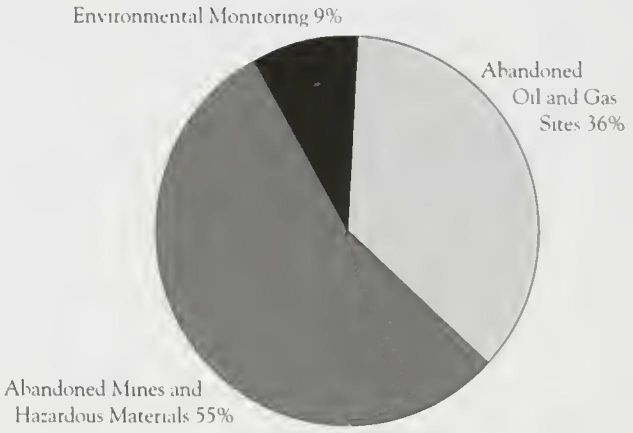
Reclamation and Development Grants Program

The Reclamation and Development Grants Program (RDGP) is a state-funded grant program designed to fund projects that "*indemnify the people of the state for the effects of mineral development on public resources and that meet other crucial state needs serving the public interest and the total environment of the citizens of Montana*" (MCA 90-2-1102). The program was established in 1987. Any department, agency, board, commission, or other division of state government or any city, town, county, or other political subdivision or tribal government within the state may apply for a RDGP grant.

The funding source for this program is interest income from the RIT Trust fund and mineral taxes. Grants of up to $300,000 are available per application, and a minimum of $3 million in grant funds is available each biennium.

Reauthorization of funds not used in prior bienniums, plus the statutory allocation of $3 million for this biennium, enabled the 2001 Legislature to approve 22 projects with $4.1 million in revenue available (see Table 9); the allocation is illustrated in Figure 6. Agreements for 18 of these are being negotiated, bringing the total number of active grants being administered to 35.

Figure 6
Legislative Allocation of Funds for
Approved Reclamation and Development Grant Projects



Three RDGP grants (at $300,000 each) were approved to conduct reclamation activities at the Zortman and Landusky Mines in Phillips County. The mine operator, Pegasus Gold Corporation, declared bankruptcy in 1998, leaving the State of Montana responsible for mine cleanup and reclamation. The Zortman and Landusky environmental impact statement (EIS) estimates that the preferred cleanup alternatives for both mine sites would cost approximately $52 million. Because bonding for the mine site was not sufficient for the cleanup, the Montana Department of Environmental Quality, which is administering the cleanup, must seek supplemental funding from a variety of sources, including RDGP.

The three RDGP grant projects involve cleanup of the Ruby Gulch mine tailings, incorporation of organic amendment material into mine cover soils, and establishment of a trust fund for long-term water treatment. Contracts for these three projects are now being negotiated.

Table 9
Reclamation and Development Grants Approved by the 2001 Legislature
(in Order of Their Ranking)

Recipient	Project Name	Approved Funding
Montana Board of Oil and Gas Conservation	2001 Eastern District Orphaned Well Plug and Abandonment, and Site Restoration	$ 300,000
Montana Board of Oil and Gas Conservation	2001 Northern District Orphaned Well Plug and Abandonment, and Site Restoration	300,000
Montana Department of Environmental Quality	Development of a Trust Fund to Ensure Long-Term Water Treatment at Zortman and Landusky	300,000
Powell County	Ontario Wet Tailings Reclamation	300,000
Lewistown, City of	Reclamation of Brewery Flats on Big Spring Creek	297,740
Montana Department of Environmental Quality	CMC Pony Millsite Reclamation Project	291,191
Broadwater Conservation District	Big Belt Mine Reclamation Projects	145,380
Deer Lodge, City of	Former Chicago, Milwaukee Railroad Passenger Fueling Area	140,000
Butte-Silver Bow County	Upper Clark Fork Basin, Superfund Technical Assistance	49,272
Montana Board of Oil and Gas Conservation	2001 Southern District Orphaned Well Plug and Abandonment, and Site Restoration	250,000
Custer County Conservation District	Yellowstone River Resource Conservation Project	299,977
Cascade County/Weed and Mosquito Management	Fort Shaw Weed Shop Soil Contamination Remediation	218,466
Montana Department of Environmental Quality	Zortman and Landusky Mines, Organic Soil Amendments	300,000
Montana Department of Environmental Quality	Zortman Mine, Ruby Gulch Tailings Removal (contingent on federal funds)	300,000
Montana Department of Environmental Quality	Coal Bed Methane EIS	250,000
Glacier County	2000 Glacier County Plugging and Abandonment, Aid to Independent Operators	150,000
Pondera County	Pondera County Oil and Gas Well Plug and Abandonment Project	100,000
Liberty County	Bear Paw Plug and Abandonment Aid Program for Small Independent Operators in Liberty, Hill, Blaine, and Chouteau Counties	50,000
Funding of projects below this line will depend on the availability of revenue.		
Montana Department of Environmental Quality	Gregory Mine Reclamation Project	300,000
Sheridan County Conservation District	Protecting Natural Resources by Reclaiming Oil Field Brine-Contaminated Soils	299,950
Montana Department of Natural Resources and Conservation	Environmental Hazard Sites on State Land	272,500
Flathead County	Assessment of Aggregate Resources for Long-Term Planning in Flathead and Missoula Counties	167,821
	TOTAL	$ 5,082,297

Renewable Resource Grant and Loan Program

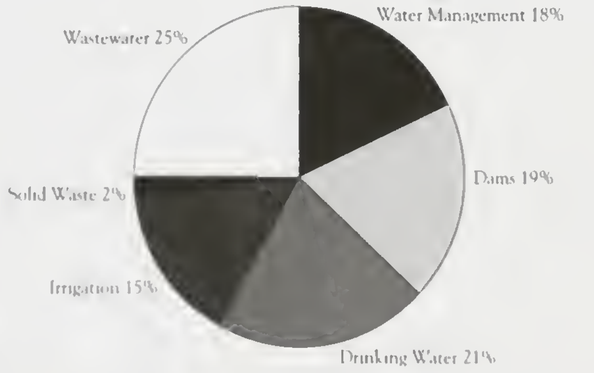
The Montana Legislature established what is now called the Renewable Resource Grant and Loan Program (RRGLP) in 1993 by combining the Water Development Program and the Renewable Resource Development Program. RRGLP was established to promote the development of renewable natural resources. Funding from the RIT interest and the mineral tax is available to research, plan, design, construct, or rehabilitate projects that conserve, develop, manage, and/or preserve Montana's renewable resources. RRGLP funds a variety of natural resource projects including groundwater studies, irrigation rehabilitation, water and soil conservation, municipal drinking water improvements, public wastewater, and forest enhancement.

A total of $4.3 million is available over the biennium for grants to public entities for renewable resource projects. An additional $300,000 is available for grants to assist public entities in the planning and design of projects eligible for funding under the RRGLP, and $100,000 is available for private grants. The loan program is funded through the issuance of general obligation and coal severance tax bonds. These private loans are primarily for irrigation projects.

Public Grants

Up to $100,000 is available per grant application. The allocation of funding for the 62 projects approved by the 57th Montana Legislature is illustrated in Figure 7. Table 10 lists the projects in the order in which they are ranked. The total cost of a project usually includes funds from other sources, in addition to RRGLP grants and loans.

Figure 7
Legislative Allocation of Funds for Approved Renewable Resource Development Grant Projects



In FY 2001, the bureau administered a total of 127 renewable resource grants, and $2,826,211 was disbursed.

An example of a renewable resource grant project that was completed in FY 2001 is the Buffalo Rapids Project. This project was funded by a $91,622 grant authorized by the 1999 Legislature and Buffalo Rapids Project, which donated $101,513 in labor, machine shop time, and heavy equipment. This irrigation project was originally constructed between 1940 and 1945 as a U.S. Bureau of Reclamation project. It directly benefits 155 full-time and 27 part-time farmers and is a significant portion of Custer, Dawson, and Prairie Counties' economies. The Terry pumping plant was within the first 450 feet of the discharge line from the pump house. These lines persistently leaked, and the loss at the peak of the pumping season was measured at 6.15 acre-feet per day. The project entailed replacing the first 450 feet of each of the three discharge lines, including check valves and vacuum valves, and coating the remaining 1,225 feet of each line with polyurethane material. The existing concrete pipe was replaced with 30-inch PVC plastic irrigation pipe. All work was performed by the irrigation project staff including project design and management by the Buffalo Rapids Irrigation Project manager. The U.S. Bureau of Reclamation reviewed the preliminary design.

Table 10
Renewable Resource Grant and Loan Program Projects Approved by the 2001 Legislature

Rank	Applicant	Project Name	Grant Funding	Loan Funding
1	Montana Department of Natural Resources and Conservation	Bair Dam Rehabilitation Proposal	$ 100,000	$ 988,772
2	Montana Department of Natural Resources and Conservation	Nevada Creek Dam Rehabilitation	$ 100,000	$ 494,041
3	Montana Department of Corrections Correctional Enterprises Ranch	Rehabilitation of Prison Ranch Dams	$ 94,300	
4	Canyon Creek Irrigation District	Wyant Lake Dam Rehabilitation	$ 100,000	
5	Canyon Creek Irrigation District	Canyon Lake Dam Rehabilitation	$ 100,000	
6	Alder Water and Sewer District	Wastewater Collection and Treatment System	$ 100,000	
7	Flathead Basin Commission	Implementation of the Flathead Basin Voluntary Nutrient Reduction	$ 99,697	
8	Cascade County Conservation District	Sun River Valley Ditch Company's Water Conservation and Quality Improvement Project	$ 99,230	
9	Virginia City, Town of	Wastewater Treatment System	$ 100,000	
10	Whitefish County Water and Sewer District	Revisit to the Limnology of Whitefish Lake	$ 75,000	
11	Florence County Water and Sewer District	Wastewater System Improvements	$ 100,000	
12	Bitterroot Irrigation District	Water Use and Water Quality Improvement Project - Phase II	$ 100,000	
13	Manhattan, Town of	Wastewater System Improvements	$ 100,000	
14	Glen Lake Irrigation District	Therriault Creek Point of Diversion Infrastructure and Fish Habitat Improvement Project	$ 94,500	
15	Whitefish, City of	Wastewater Aeration System Improvements and Lagoon Solids Removal Project	$ 100,000	
16	Ruby Valley Conservation District	Lower Ruby Valley Groundwater Management Plan	$ 73,764	
17	Charlo Sewer District	Wastewater System Improvements	$ 100,000	
18	Whitewater Water and Sewer District	Wastewater System Improvements	$ 100,000	
19	Glasgow Irrigation District	Vandalia Diversion Dam Rehabilitation, Phase II, North Bridge Pier	$ 100,000	
20	Geraldine, Town of	Water System Improvements Phase I	$ 100,000	
21	Ashland Water and Sewer District	Wastewater System Improvements	$ 100,000	
22	Milk River Project Joint Board of Control	Saint Mary River Siphon Repair Phase II	$ 100,000	
23	Stanford, Town of	Wastewater System Improvements	$ 100,000	
24	LaCasa Grande Water and Sewer District	Water Supply and Distribution System	$ 100,000	
25	Clyde Park, Town of	Water System Improvements Project	$ 100,000	
26	Nashua, Town of	Wastewater System Improvements	$ 100,000	
27	Park City/County Water and Sewer District	Wastewater System Improvements	$ 100,000	
28	Lower Willow Creek Drainage District	Lower Willow Creek Dam Rehabilitation	$ 100,000	$ 1,350,000
29	Deer Lodge, City of	Clark Fork River Water Quality Protection Project	$ 100,000	
30	Lewis and Clark Conservation District	Willow Creek Water Quality Improvement Project	$ 98,636	

(Continued on page 38)

Table 10
Renewable Resource Grant and Loan Program Projects Approved by the 2001 Legislature

(Continued from page 37)

Rank	Applicant	Project Name	Grant Funding	Loan Funding
31	Hot Springs, Town of	Water System Improvements	$ 100,000	
32	Wisdom Sewer District	Wastewater System Improvements	$ 100,000	
33	Teton County	Burton Bench Aquifer Evaluation	$ 74,261	
34	Elk Meadows Ranchettes County Water District	Water System Improvements	$ 100,000	
35	Carbon Conservation District	Whitehorse Ditch Reorganization	$ 57,200	
36	Choteau, City of	Water System Improvements	$ 100,000	
37	Beaverhead County	Big Hole Watershed Management Project	$ 75,000	
38	Hobson, Town of	Water Exploration	$ 50,000	
39	Circle, Town of	Water Reclamation Project	$ 60,000	
40	Stillwater County Commissioners	Improving Soil Productivity and Water Quality in South Central Montana through Land-Use Changes	$ 74,153	
41	Missoula, City of	Rattlesnake Stream Restoration and Flood Control Project	$ 100,000	
42	Helena Valley Irrigation District	Fixed Wheel Gate and Hydraulic Cylinder Repair	$ 100,000	$ 188,400
43	Hill County	Beaver Creek Dam Rehabilitation	$ 75,000	
44	Hinsdale Water and Sewer District	Wastewater System Improvements	$ 100,000	
45	Richey, Town of	Water System Improvements	$ 100,000	
46	Charlo Water District	New Water Well	$ 100,000	
		Funding of projects below this line will depend on the availability of revenue.		
47	Laurel, City of	City of Laurel Groundwater and Salinity Management, Feasibility Project	$ 100,000	
48	Malta Irrigation District	Replacement and Modification of Check Structures	$ 68,290	
49	Glen Lake Irrigation District	Costich Drop Improvements Project	$ 100,000	
50	Montana State University	Married Student Housing Irrigation Project	$ 100,000	
51	Scobey, City of	Well Field Rehabilitation Study	$ 50,704	
52	Power-Teton County Water and Sewer District	Water System Improvements	$ 100,000	
53	Butte-Silver Bow Local Government	Elimination of Combined Sewers	$ 27,919	
54	Great Falls, City of	Yard Waste Management Facility	$ 100,000	
55	Lambert County Sewer and Water District	Water System Improvement Project	$ 100,000	
56	Park Conservation District	Wildlife Assessment: Governor's Upper Yellowstone River Task Force Cumulative Effects Investigation	$ 75,000	
57	Troy, City of	Water System Improvements	$ 99,970	
58	Butte-Silver Bow Local Government	Basin Creek Dam #1 and #2 Site Improvements	$ 100,000	
59	Whitefish, City of	Whitefish City Beach	$ 58,650	
60	Lockwood Water and Sewer District	Wastewater Collection System	$ 100,000	$3,300,000

(Continued on page 39)

Table 10
Renewable Resource Grant and Loan Program Projects
Approved by the 2001 Legislature

(Continued from page 38)

Rank	Applicant	Project Name	Grant Funding	Loan Funding
61	Montana Department of Natural Resources and Conservation	Seepage Monitoring Program (DNRC)	$ 75,000	
62	Montana Department of Natural Resources and Conservation	Seepage Monitoring Program (DFWP)	$ 75,000	

Project Planning Grants

Project planning grants provide up to $10,000 on a 50 percent cost share to governmental entities for the completion of preliminary engineering, design, and feasibility analysis. This new part of the program has been very successful. In FY 2001, 52 contracts in the total amount of $400,000 were administered for grants to communities all over the state.

Emergency Grants

In addition to the grants authorized by the legislature, the department has authority to provide $125,000 in emergency grants to governmental entities if delaying the project until legislative approval can be given would cause loss of property or create legal liability. In FY 2001, DNRC made five emergency grants.

Here are some examples of entities receiving emergency grant funds. The Town of Geraldine received two grants totaling $24,079 for rehabilitation and expansion of its drinking water supply at springs located on Square Butte; the projects were necessitated by reduced spring flows, and both were drought-related. Bitterroot Conservation District received $30,000 for reclamation efforts associated with the wildfires of 2000. Broadwater Conservation District received $15,000 for similar efforts to reclaim areas damaged by the fires in Broadwater County.

Private Grants

Financial assistance is available to any individual, association, partnership, or corporation (both for-profit and nonprofit). The legislature allocated $100,000 per biennium for private grants. By law, grant funding for a single project may not exceed 25 percent of the total estimated cost.

Most of the funds are targeted to assist small, privately owned water systems. Owners of small systems have difficulty in meeting Safe Drinking Water Act regulations, but must meet the same requirements that municipal water systems face. The department has identified 85 private water systems for potential funding. The average size of a grant is just over $2,941; the grant must be matched on a 3-to-1 basis. DNRC awarded 17 grants totaling $31,474 in FY 2001.

Private Loans

Loans for private water development projects are available from the department. Loans to individual private entities may not exceed the lesser of $200,000 or 80 percent of the fair market value of the security given for the project. Private loans to individuals must be secured with real property. Loans up to $300,000 are available for such organizations as water user associations and ditch companies. These loans are scored by the revenue produced by the system. Irrigation system improvements — for example, the conversion from flood irrigation to sprinkler irrigation — are the most common type of projects funded through private loans.

To finance loans, the law provided authority to issue general obligation renewable resource bonds up to a total outstanding balance of $20 million. The current outstanding balance on the loans is $12.3 million. In FY 2001, 166 loans were being administered, and DNRC closed 54 new loans totaling $5,083,640.

In FY 2001, the private loan program sold $4.25 million in bonds to the Water Pollution Control State Revolving Fund. The interest rate on these bonds is 4 percent, which is 2 to 3 percent below traditional market rates for these bonds. Adding a 0.3 percent charge for a loan loss reserve, DNRC is able to offer potential borrowers a 4.3 percent loan for irrigation improvement projects. All loans must qualify as "non-point pollution control projects." Because the program funds irrigation improvement projects, primarily, all of the new loan requests have qualified for these low interest funds.

Public Loans

This program makes loans to communities for renewable resource projects. The program was started in 1981 by the Montana Legislature, which granted a total of $250 million in coal tax bonding authority. In FY 2001, 73 public loans with a balance of approximately $46.8 million were outstanding. The public loans are listed in Table 11. The legislature has approved $18 million in loans for which funds have not yet been drawn.

The Renewable Resource Public Loan Program has been evolving into a new role over the last decade. Prior to 1990, the public loan program was one of the few low-cost sources of public loan funds that municipalities had available. Many of the early loans in the public loan program were for municipal water and wastewater projects. However, since the creation of the Water Pollution Control and Drinking Water State Revolving Fund (SRF) Loan Programs, municipalities are borrowing funds at 4 percent from the SRF programs. This has freed capacity in the public loan program for other types of projects. In fact, there has been a steady increase in the number of irrigation loans that the program has funded, which reflects the need for repair of aging ditches, diversions, and other irrigation infrastructure as well as the lack of any federal assistance for these projects. The public loan program also provides a safety net for municipal projects, such as solid waste projects, that may not qualify for SRF funding.

Table 11
Public Loans

Applicant	Balance Due
Anaconda-Deer Lodge County	$ 193,017
Antelope	61,386
Beaverhead County/Red Rock Water and Sewer	1,979,564
Belgrade	248,231
Bitterroot Irrigation District	719,727
Bozeman # 1	235,432
Bozeman # 2	412,177
Broadwater Power Project # 1	21,735,000
Broadwater Power Project # 2	430,000
Charlo Water District	12,052
Conrad	83,898
Culbertson # 1	201,419
Culbertson # 2	32,654
Cut Bank - North Glacier Water and Sewer District	54,205
Denton	95,629
Dutton # 1	104,006
Dutton # 2	18,608
East Bench Irrigation District	491,000
East Helena	235,687
Ekalaka	80,471
Ennis # 1	54,080
Ennis # 2	612,965
Fairview	166,941
Flathead County for Evergreen	2,779,532
Forsyth # 1	293,756
Forsyth # 2	254,392
Fort Benton # 1	279,128
Fort Benton # 2	462,114
Gardiner - Park County Water District	205,312
Glasgow	1,481,927
Glendive	1,108,533
Harlem	210,000
Havre	961,745
Huntley Irrigation District # 1	274,191
Huntley Irrigation District # 2	1,143,009
Hysham	174,677
Kevin	74,767
Lakeside County Water and Sewer # 1	$ 173,619
Lakeside County Water and Sewer # 2	376,937
Libby	177,226
Lima	122,393
Lockwood Irrigation District	110,718
Miles City	977,782
Mill Creek Water and Sewer District	661,854
Neihart	124,881
Park County	70,074
Pondera County Canal and Reservoir # 1	328,944
Pondera County Canal and Reservoir # 2	265,331
Poplar	177,129
Sage Creek Water District	503,348
Sanders County	92,892
Shelby	177,863
Shields Canal Water Users Association	14,627
State Water Projects Bureau, DNRC	
Deadman's Basin	350,000
East Fork Rock Creek Dam	800,000
Missouri Pipespan	480,516
Petrolia Dam	309,179
Upper Musselshell Water Users Association	75,767
Yellowwater Water Users Association	10,840
Sun Prairie Sewer District	359,687
Sun Prairie Water and Sewer District	150,310
Three Forks # 1	99,751
Three Forks # 2	66,842
Tin Cup Water and Sewer District	263,552
West Yellowstone # 1	223,007
West Yellowstone # 2	324,128
White Sulphur Springs	193,318
Whitefish	362,662
Whitehall	35,349
Wibaux	172,839
Winnett	25,037
Yellowstone County # 1	100,432
Yellowstone County # 2	110,156
TOTAL	$ 46,830,222

Treasure State Endowment Program Loans

The Treasure State Endowment Program (TSEP) is administered by the Montana Department of Commerce. However, if a loan is recommended by the Department of Commerce and authorized by the legislature, DNRC is responsible for closing and administering the loan. This relationship was developed because of the loan expertise and financial management system that DNRC has developed over the last 15 years in administering the Renewable Resource Grant and Loan Program.

DNRC is working with the Department of Commerce on over 30 projects that are combined TSEP and RRGLP projects. The Department of Commerce also reviewed a loan application for a bridge construction project in Yellowstone County and recommended a $620,000 loan. This recommendation was adopted by the legislature, and DNRC is prepared to enter into a loan agreement with the county. The legislature also appropriated a TSEP grant for this project, and it appears that revenues will be sufficient to fund the grant. If so, there may be no need to borrow funds from the state.

Conservation District Water Reservations

In 1978, the Board of Natural Resources and Conservation granted water reservations to 14 conservation districts (CDs) in the Yellowstone River basin. Nine CDs were granted reservations in the upper Missouri River basin in 1992, and eleven CDs were given reservations in the lower and Little Missouri River basins in 1994. Some CDs have reservations in more than one basin. The Resource Development Bureau provides legal, technical, and programmatic assistance to conservation districts in administering water reservations.

At the end of the 2000 irrigation season, there were a total of 160 CD water reservation projects in the Yellowstone River basin. These projects put to use 67,058 acre-feet of water, which is 12 percent of the CDs' total allocated water.

Thirty-nine reserved water use authorizations had been issued by CDs in the Missouri River basin by the end of the 2000 irrigation season. These projects have developed 18,830 acre-feet of water, which is 6 percent of the CDs' allocated water.

The Irrigation Development Program, which was established in 1999, is expected to stimulate development of CD water reservations in several ways. Program staff are providing assistance with new irrigation projects and encouraging use of water reservations. Grants of up to $20,000 each are also available in connection with both new irrigation projects and existing irrigated lands. The Irrigation Development Program is discussed in more detail in the next section of this report.

Irrigation Development Program

The Vision 2005 Task Force organized by the Montana Department of Agriculture set a goal to double the value of agriculture in Montana by the year 2005. One of the key components of this vision was to develop 500,000 acres of new irrigation projects that would grow high value crops such as potatoes and sugar beets. The 1999 legislature established the Irrigation Development Program to accomplish this goal.

As part of this program, CARDD hired an irrigation development specialist and an agricultural engineer to lead the effort. They provide assistance with new irrigation projects and encourage prospective irrigators to make use of the conservation districts' water reservations.

As another part of this program, Irrigation Development Grants are now available through DNRC. Grants are limited to $20,000 each. Grants can be given for projects that lead toward the development of new irrigation and for activities that increase the value of agriculture for existing irrigated lands. Examples include test wells for irrigation, feasibility studies of an irrigation improvement or new system, and providing information to the public, such as agriculture tours to educate producers on new technology. Both private and public applicants are eligible.

In FY 2001, program staff worked with groups throughout eastern Montana to pursue the development of new projects and find ways to increase the value of existing irrigation. Irrigation development projects have involved high lifts, drilling new wells, and building dams large enough to hold water for irrigation sprinklers. Approximately 17 irrigation projects are ongoing, with small groups of producers risking their time, energy, and money to see whether there is an opportunity to increase the value of their farms. Dryland farmers are starting to convert to sprinkler irrigation for high value crops, and experienced irrigators are increasing their efficiencies by converting flood to sprinkler irrigation. Potato growers have been looking for more acres.

Not only is irrigation being developed for high value crops, it is also an alternative for ranchers who would like to have pasture all summer for their herds. With an intensive grazing rotation under these irrigation pivots, ranchers can rest their rangeland and improve utilization of the grasses.

Districts continue to make major progress toward developing their reservations. Work is ongoing to obtain low-cost electric power for irrigation through the Pick-Sloan Program. The districts' efforts aim to obtain a portion of the power generated at existing federal facilities such as Fort Peck Dam. Also, Treasure County Conservation District continues to offer a low-interest loan program to develop reserved water.

Most of the new and improved irrigation systems show feasibility and will develop into profitable operations. Table 12 lists the grants approved in FY 2001. There was $150,000 available for grants.

Regional Water Systems

In FY 2001, a regional water systems coordinator was hired. This position was established to:

- Maintain contact with local system authorities, project sponsors, and contractors
- Ensure communications with and participation of various involved state government agencies
- Serve as a liaison to Tribal governments and appropriate federal government agencies
- Provide a point of contact within state government for those with questions about the systems

Table 12
Irrigation Development Grants Issued in FY 2001

Grant Recipient	Project	Amount
Cartersville Irrigation District	Analysis of headworks and irrigation system	$ 18,500
Fort Peck Tribes	Consultant for Sprole Irrigation Project	11,500
Fort Peck Water Users Association Inc.	Consultants to improve project operations	15,000
Hysham Irrigation District	Consultants to improve project operations	19,750
Lower Yellowstone Conservation District Development Council	Pick-Sloan strategy and procedures	15,000
Montana Bureau of Mines and Geology	Irrigation well technical review	10,000
Paradise Valley Irrigation District	Preparation and groundwork required for funding	12,500
Richland County Applicant # 1	Irrigation test well drilling	5,000
Richland County Applicant # 2	Irrigation test well drilling	5,000
Roosevelt County Applicant	Irrigation test well drilling	5,000
Rosebud Conservation District	Rosebud-Treasure Ag Tour 2000	3,075
Rosebud County Applicant	Irrigation test well drilling	5,000
Sun River Watershed Group	Loggers and watermark sensors	2,500
Treasure County Applicant	Irrigation test well drilling	5,000
Valley County Conservation District	Milk River Northern Tributaries Tour	2,295
West Crane Sprinkler Irrigation Project, LLC.	Legal assistance for irrigation district	10,000
Yellowstone County Applicant	Irrigation test well drilling	4,850
	TOTAL	$ 149,970

The Fort Peck Dry Prairie Rural Water System received authorization from the U.S. Congress in October 2000, and draft phases of engineering review and environmental assessment are moving forward. Legislation for authorization of the Rocky Boy's — North Central Montana Rural Water System was introduced in the U.S. Congress in May 2001. Both of these projects are extensive in scope, with total funds for completion estimated in the neighborhood of $200 million each.

Another regional water system proposed for Central Montana is in the planning stages. The working title of this project is the Musselshell Valley Regional Water System, and it would stretch from Judith Gap south to Harlowton, and then east to Melstone, at an estimated cost of $34 million.

A fourth project currently under consideration would bring phased-in central sewage collection and wastewater treatment to significant portions of the Gallatin Valley, in areas adjacent to the Gallatin River that are currently being served by on-site sewage systems of varying age and treatment efficacy.

FORESTRY DIVISION

(LEFT) BOB LOGAN, MSU EXTENSION FORESTRY

ERIC KURTZ

JOE WULFEKUHLE

FORESTRY DIVISION

Protecting Montana's natural resources from wildland fires through regulation and partnerships with federal, state, and local agencies, and helping Montanans achieve land stewardship and compliance with state forestry laws.

The Forestry Division, headquartered in Missoula, is responsible for planning and implementing forestry programs through a network of field offices located across the state. The forestry program has two major functions: fire and aviation management, and service forestry. Each function is further broken down into programs and subprograms, most with statewide application. The Forestry Division has the following goals:

- Protecting the state's natural resources from wildfire, insect pests, and disease
- Sustaining or improving the natural resources of private forestland for the good of all Montanans
- Promoting and supporting conservation practices on all lands in Montana
- Enforcing the state's forest practices laws in a manner that is both fair and consistent to all parties, and that complies with the intent of the legislation
- Encouraging the maintenance, planting, and management of trees and shrubs in Montana communities

Fire and Aviation Management

As charged by state law, DNRC protects the natural resources of the state from fire and is responsible for fire protection on all forestlands within this state that are officially classified by the department as forestlands.

Protection

DNRC's Fire and Aviation Management Bureau is a team of trained professionals providing wildland fire service leadership to Montana, commissioned by Montana citizens to protect the natural resources of the state by preventing and suppressing wildland fires, and accountable to Montana citizens. Presently, all wildlands in Montana have some form of fire protection. DNRC protects natural resources on state and private lands through aggressive fire prevention and protection activities. A total of 50,550,225 acres of state-owned and private lands are protected as detailed in state resource management plans, or as required by law (see Table 13). The Fire and Aviation Program staffs 65 engine (and water tender) companies and 5 helicopters to provide direct protection of 5.1 million acres. The program also loans over 350 engines and water tenders to local fire agencies, primarily in the eastern part of the state. DNRC has been given the responsibility to coordinate all contract responses of fire department resources that cross county lines.

Direct Protection

DNRC provides direct protection to a total of 5,176,498 acres consisting of 3,506,067 acres of state and private land; 694,665 acres of U. S. Bureau of Land Management (BLM) lands; 4,551 acres of Tribal/U.S. Bureau of Indian Affairs (BIA) lands; 18,117 acres of U.S. Fish and Wildlife Service (FWS) lands; 2,776 acres of Bureau of Reclamation (USBR) lands; and 950,322 acres of U. S. Forest Service (USFS) lands. Privately owned forested lands within the boundaries of an incorporated city are included. Priority is given to the protection of forested lands owned by the state.

State/County Cooperative Fire Protection

Under the State/County Cooperative Fire Protection Program, the department has secondary protection responsibility for 45,309,480 acres of state-owned and privately owned non-forested lands. These lands are predominantly found in eastern Montana. A network of 400 fire departments provides initial response to wildfires in the 56 counties. DNRC assists on fires that escape the counties' capabilities and provides them with training, prevention materials, and equipment.

Contracted Federal Protection

Fire protection of a total of 1,734,678 acres of state and private lands are subcontracted to federal agencies.

Table 13
Fire Protection by DNRC in FY 2001

Total Acres	Category	State and Private Lands (Acres)	Public Lands (Acres)
5,176,498	DNRC Direct Protection		
	State and Private Lands	3,506,067	
	BLM Lands		694,665
	USFS Lands		950,322
	Tribal/BIA Lands		4,551
	USBR Lands		2,776
	FWS Lands		18,117
1,734,678	Federal Direct Protection[1]		
	Protected by BIA (Tribal)	150,835	
	Protected by BLM	48,759	
	Protected by USFS	1,498,214	
	Protected by FWS	36,870	
45,309,480	State/County Cooperative Fire Protection[2]	45,309,480	
	TOTALS	50,550,225	1,670,431

1. Subcontracted to federal agencies
2. Includes all 56 counties in Montana

Fire Prevention

The Fire Prevention Program's purpose is to reduce the number and severity of wildfires occurring each year. The program is made up of three parts.

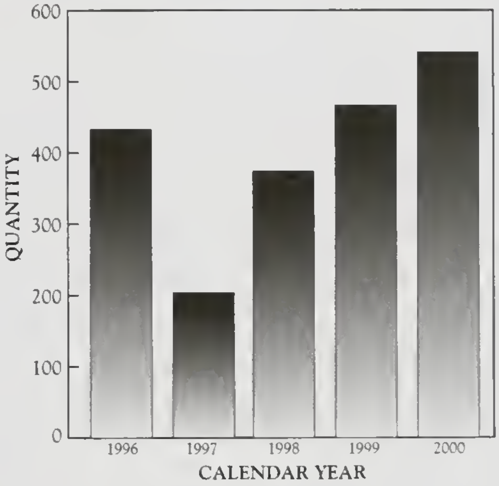
- Engineering through prescribed fire (and airshed management), fuel treatment programs, and application of DNRC's wildland/residential development guidelines
- Education through homeowner programs (like Firewise Communities), workshops, and production of printed and electronic material
- Enforcement through Forest Fire Regulations, fire cause investigation, and forest restrictions when applicable

Wildland/residential interface areas continue to be emphasized through National Fire Plan funding. Ongoing projects include fuel treatment, home fire safety evaluations, and prioritizing communities at risk.

DNRC has completed its fire risk rating on 95 percent of the direct protection areas that are determined to be high risk. Several hundred plats of proposed developments are evaluated annually, and recommendations are then submitted to county commissioners based on DNRC's Fire Protection Guidelines. The Fire Protection Guidelines for Wildland/Residential Interface Development continue to be applied to existing and proposed developments throughout the state.

Major issues in FY 2001 include implementation and monitoring of programs funded by the National Fire Plan, implementation of a revised forest restriction process, and promotion of ongoing educational programs.

Figure 8
Number of Fires on State-Protected Land



Fire Suppression

Through the Fire Suppression Program, DNRC directly protects 5,176,498 acres of state, private, and federal lands; assists all 56 cooperating counties with fires exceeding their capabilities on 45,309,480 acres of state and private lands; and subcontracts fire protection on 1,734,678 acres of state and private lands to the U.S. Forest Service, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Bureau of Indian Affairs (Tribal). DNRC also provides support and assistance to federal fire agencies and other states when appropriate.

The fire conditions in Montana in calendar year 2000 were the worst since 1910. The number of fires that occurred during the 2000 fire season was well above the five-year average; 541 fire incidents that burned a total of 168,792 acres were reported (see Figures 8 and 9). The average number of fires over the last five years is 414 per year, and the average number of acres burned over each of the last five years is 83,138. The annual acreage burned varied from 3,419 acres in 1997 to 168,792 acres in 2000.

Figure 9
Acres Burned on State-Protected Land

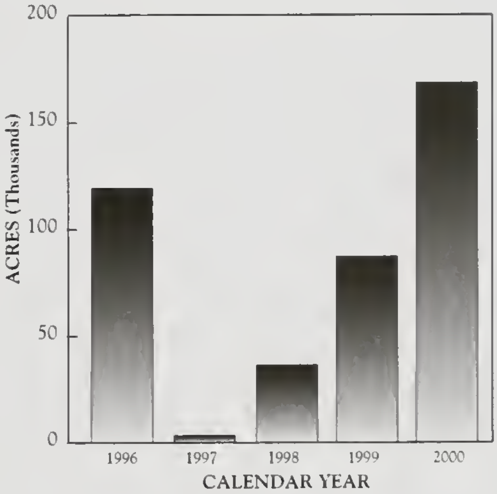
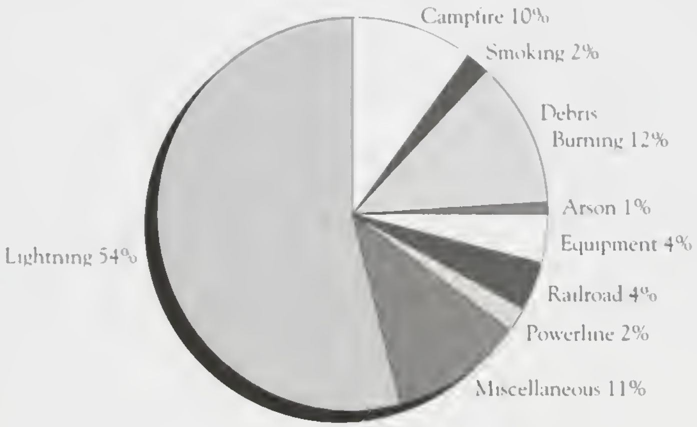


Figure 10
Percentage of Fires, by Cause
(5-Year Average)



Lightning is the single most frequent cause, starting 54 percent of the fires, with debris burning being the next most frequent, causing 12 percent (see Figure 10). DNRC contains an average of 94 percent of the direct protection fires at under 10 acres in size. The charts are based on direct protection and county assist fires.

DNRC also provided support to Disaster and Emergency Services on a few nonfire incidents in FY 2001. These incidents involved law enforcement and a threat of flooding from potential dam failure.

Fire Training

The Fire and Aviation Management Bureau provides training in fire prevention, detection, investigation, suppression, aviation, communications, safety, prescribed fire, participation on incident management teams, and wildland fire training instruction.

In FY 2001, DNRC conducted and coordinated 112 courses in wildland fire training for 2,916 volunteer and career firefighters in 56 counties throughout the State/County Cooperative Fire Protection Program and for DNRC's seasonal firefighters and support personnel for DNRC direct protection of over 5 million acres of forest lands. This is an increase of 14 courses and 1,081 firefighters over last fiscal year. In addition, DNRC cooperated in each of the five Northern Rockies zones that completed 133 courses serving 2,660 interagency firefighters.

To meet the need for firefighters for the 2001 fire season, DNRC facilitated the training of 2,825 National Guard, Canadian, private contractor, and emergency firefighters through the Northern Rockies Coordination Group.

DNRC is actively involved in the development of overhead and management personnel within the agency in cooperation with other wildland fire agencies, in local communities, statewide, and at the Northern Rockies Interagency Training Center in Missoula.

Development and Support

Through its Equipment Development Program, DNRC obtains federal excess property and develops it into fire suppression equipment and vehicles. This equipment is used primarily to support the State/County Cooperative Fire Protection Program. In FY 2001, DNRC obtained supplies, vehicles, and aircraft that have a total value of $756,322 through the Federal Excess Property Program. The equipment acquired included a total of 18 vehicles and trailers.

The 21 individual development projects that were completed in FY 2001 are listed in Table 14.

Table 14
Development Projects in FY 2001

Develop Type 6 (200-gallon) wildland engines	14
Develop Type 5 (900-gallon) engine	1
Develop communication engineer support truck	1
Develop county support truck	1
Develop fork lift	1
Rebuild 8 flatbeds	1
Rebuild 8 pump panels	1
Rebuild 20 pump heads	1

Aviation

The Aviation Program operates and maintains a fleet of eight aircraft (three-fixed wing and five rotary wing). The fixed wing aircraft, which are located in Kalispell, Missoula, and Helena, are used for fire patrol and personnel transportation. Three medium (Huey) helicopters are stationed in Kalispell, Missoula, and Helena for initial attack, support, and suppression work. Two light helicopters (Bell 206s) are stationed in Helena. One of these is owned by the Department of Environmental Quality (DEQ). DNRC pilots fly this helicopter on DNRC and DEQ missions. The second light helicopter is used for backup or additional coverage.

In FY 2001 the aircraft flew a total of 1,894 hours. Other program statistics are shown in Table 15.

Table 15
Aviation Program Accomplishments in FY 2001

Fire administration	40 hours
Fire detection/reconnaissance	685 hours
Fire—other	42 hours
Fire suppression—initial attack and extended attack	803 hours
Fire suppression—project (project fires[1])	41 hours
Fire training	73 hours
Non-fire missions	210 hours

[1] Project fires are large fires with organized fire management teams.

To enhance and strengthen the initial attack capabilities required to meet the challenges of the FY 2001 fire season, the state contracted single engine air tankers (SEATS) from Clovis, New Mexico. The aircraft, four 802 air tractors, operated out of several new satellite bases established by DNRC for the operation. Temporary bases were set up in Ronan, Seeley Lake, Lincoln, Great Falls, Dillon, Butte, Hamilton, Plains, Libby, and Bonners Ferry, Idaho.

Table 16
SEAT Activity

Initial attack and support	326 hours
Retardant delivered	1.85 million gallons

The 2001 fire season brought many maintenance challenges. Air operations maintenance had to repair and replace many parts during the season in order to maintain 100 percent availability to meet DNRC's initial attack responsibilities. It also had to meet an emergency service bulletin and change out all of the main rotor masts on the Hueys. The mechanics traveled over 20,000 miles in their maintenance van to keep DNRC helicopters in service.

National Fire Plan

Initiated by Congress in 2001, the National Fire Plan is a national effort to address wildland fire concerns throughout the country. Specifically, there are five components to the National Fire Plan.

- Firefighting
- Rehabilitation and restoration
- Hazardous fuel reduction
- Community assistance
- Accountability

The DNRC Forestry Division received nearly $3 million in additional funding from the National Fire Plan. The funding will be disbursed in FY 2002.

Service Forestry Programs

DNRC's service forestry programs provide products and services to various client groups and individuals. The State Nursery grows seedlings for private conservation plantings and reforestation of state-owned lands. Education emphasizing the stewardship and care of forestlands is presented to private forest owners and resource professionals. Communities are assisted with the care and planting of their community forests. Montana's forest laws are upheld. Private forestland improvements are administered using federal cost-share funds. Forest health problems are identified and monitored statewide.

The Service Forestry Bureau interacts with other agencies throughout the West to represent Montana's interests on private forestland issues. This includes chairing the Council of Western State Foresters' Federal Policy Committee.

Bureau officials are strategically involved with coordinating and delivering National Fire Plan programs. One example is conservation district and service forestry officials, working together, created a cost-share program to help forest landowners impacted by the fires in 2000.

State Nursery

DNRC's nursery produces, sells, and distributes seedlings for conservation plantings such as reforestation, farmstead windbreaks, fire restoration, shelterbelts, wildlife habitat, living snow fences, stream bank stabilization, and other conservation uses. The nursery provides seedlings to the Conservation Reserve Program, Forest Stewardship Program, Wildlife Habitat Incentives Program, Pheasants Forever, reforestation efforts, and numerous other conservation programs.

In FY 2001 the nursery sold 881,877 conservation seedlings and produced 173,341 seedlings for reforestation of school trust lands, for a total of 1,055,218 seedlings, as itemized in Table 17.

Table 17
Nursery Seedling Sales from FY 1997 to FY 2002

Fiscal Year	Conservation Seedling Program				Trust Land Seedling Program			Total Nursery Production
	Seedling Production	Seedlings Delivered	Nursery Revenue	Nursery Expenditures	Seedlings Requested	Seedlings Delivered	Seedling Expenditures	
1997	599,925	511,150	$202,448	$204,245	65,725	65,759	$49,436	665,684
1998	646,800	574,125	$239,381	$236,374	180,125	170,217	$46,125	817,017
1999	903,800	859,750	$244,427	$244,089	127,565	130,326	$39,231	1,034,126
2000	740,294	712,230	$272,142	$272,799	82,130	79,592	$41,209	819,886
2001	927,677	881,877	$346,884	$339,072	201,334	173,341	$44,767	1,101,018
2002 est.	932,650	913,675	$368,500	$368,000	150,359			1,083,009

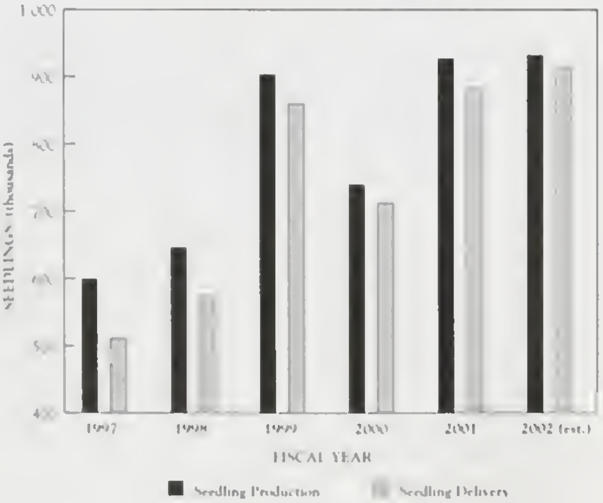
Seedling sales increased 33 percent from FY 2000 to FY 2001. The increase was primarily in reforestation and school trust land plantings. Revenue from seedling sales increased by 27.5 percent in FY 2001 to $346,884. All nursery program expenditures were recovered from the sale of seedlings, and $7,812 was carried over for capital equipment upgrades at the nursery.

DNRC nursery seedlings were planted in every county in the state, with the greatest number going to Big Horn, Fergus, Missoula, Glacier, Ravalli, and Teton Counties. One thousand thirty-nine landowners planted state-grown conservation seedlings. The number of seedlings used in various conservation practices is itemized in Table 18. Production and sales since FY 1997 are shown in Figure 11.

Table 18
Conservation Seedling Use in FY 2001

Conservation Practice	Number of Seedlings	Number of Landowners
Reforestation	353,427	84
Wildlife habitat	217,400	190
Farmstead windbreaks	190,850	534
Field shelterbelts	58,350	81
Stream stabilization	33,925	37
Living snow fences	8,550	29
Erosion control	5,075	6
All other uses	14,300	78
TOTAL	881,877	1,039

Figure 11
Conservation Seedlings
Production vs. Deliveries



The nursery maintains 40 seed orchards of selected plant materials adapted to the numerous environments present in Montana. In FY 2001 new seed orchards for snowberry and silverberry were established at the nursery site. Establishment and maintenance of seed orchards at the nursery ensures the long-term availability of Montana-adapted plant materials to landowners in the state. The nursery collected, processed, or purchased 1,495 pounds of seed from the seed orchards or field collections in the state.

Forest Pest Management

This program provides pest surveys, training, and technical services to help recognize and manage damaging insects and diseases in Montana's forests. These activities are done in cooperation with the U.S. Forest Service's Northern Region Forest Health Protection Group.

Douglas-fir beetle-caused mortality continued in 2000 in western Montana. High levels of mountain pine beetle-caused mortality occurred in lodgepole pine and second growth ponderosa pine in the same general areas, especially in the western portion of the Lolo National Forest area.

Heavy Douglas-fir tussock moth defoliation was recorded on a small, isolated patch of Douglas-fir on the Flathead Indian Reservation, just south of Saint Ignatius. Approximately 400 acres of western spruce budworm defoliation northwest of Helena were mapped from the air. Scattered forest tent caterpillar damage was again seen in western Montana. One gypsy moth male was trapped south of Livingston. Defoliation of cottonwoods and willows by the satin moth was observed in the area from Drummond to Philipsburg.

Mortality and growth losses from root disease continued to be high throughout the state. The effect of the fires of 2000 on root diseases is one of opportunity. The tree species that are best adapted to low intensity, high frequency fires are those species that are also root disease-tolerant, such as western larch and ponderosa pine. In the root-diseased areas that burned, there is the opportunity to reduce the effects from root disease by planting these species or encouraging their natural regeneration.

Dwarf mistletoe continued to cause losses of approximately 33 million cubic feet annually, mostly to Douglas-fir, western larch, and lodgepole pine. Fire events that kill infected trees will reduce the population of dwarf mistletoes.

White pine blister rust continued to be present throughout the range of five-needle pines (limber pine, whitebark pine, and western white pine) in the state and was most severe in the northwestern portion, where it continued to cause extensive mortality in western white pine.

Elytroderma needle blight was heavy in ponderosa pine in localized areas across western and central Montana. Rhabdocline needle cast was detected in Douglas-fir in large areas across the state. Needle casts in pine in eastern Montana were also heavy in localized areas. Needle blight in limber pine was low, and larch needle diseases were again low compared to the 1997 high levels.

Some of the FY 2001 program accomplishments are listed in Table 19.

The program, along with USFS, also completed and distributed the annual *Montana Insect and Disease Conditions* report.

The first year of work was completed under a mutual contract developed by Montana and Idaho for forest pathology services and funded by a USFS grant.

Table 19
Forest Pest Management Activities in FY 2001

Technical assistance to private and industrial land managers	46 assists
Professionals trained in basic pest identification	18
Professionals trained in advanced pest management	18
Loggers and private landowners trained in pest identification and management	22
Pest samples identified and management treatments recommended	23
Aerial survey completed and sketch maps distributed to unit offices	3 million acres
DNRC timber sale analyses written	2

Forestry Assistance

The Forestry Assistance Program provides a range of services to private forest landowners and economic development organizations. By conveying forestry knowledge, this program helps Montanans perform forestry work that results in good land stewardship, a healthful environment, personal profit, and general economic growth.

The Service Forestry Bureau received $570,000 of National Fire Plan funds to assist private forest landowners impacted by the fires of 2000. Officials of Montana conservation districts, the DNRC Conservation Districts Bureau, and the DNRC Service Forestry Bureau created an innovative cost-share program to provide burned area rehabilitation and fuel hazard reduction assistance to non-industrial private forest landowners. Initially $280,000 of cost-share funding was offered and applications accepted during June 2001. In response, 187 applications were received for projects totaling over $900,000 for work on over 10,000 acres statewide. Projects will be awarded during the summer of 2001. Another application period will be offered in the fall/winter of 2001.

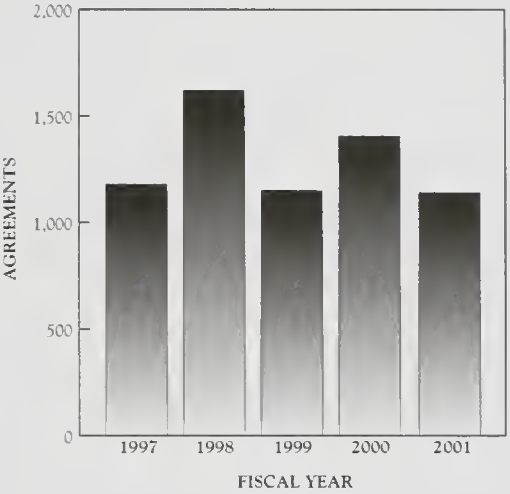
In FY 2001, DNRC provided 850 forestry assists, including 107 timber sale assists. Many informational and educational assists result in actions taken on the ground by non-industrial forest landowners. During FY 2001, 81 follow-up actions were taken. Of the 81, 41 assists on 1,652 acres included such activities as insect and disease prevention, wildlife enhancement, forest range improvement, and reforestation. In FY 2001, production of 8,246 thousand board feet (MBF) resulted from 38 previous assists on 4,037 acres of non-industrial forestlands.

Service foresters provided 1,164 person days of education, the most notable of which were the Flathead Forestry Expo and the Streamside Management/Best Management Practices (BMP) workshops.

Timber Slash

The Timber Slash Program implements state laws pertaining to control of timber slash and debris on private land to minimize wildfire hazards. The department carries out its responsibilities by entering into a bonded contract, called a Hazard Reduction Agreement (HRA), with the private party in charge of each cutting.

Figure 12
New Hazard Reduction Agreements



The program handled 1,141 new HRAs in FY 2001 (see Figure 12), while another 1,305 HRAs were certified and closed. Those numbers are a 19 percent decrease in new HRAs and a 3 percent increase in closings, compared to FY 2000 levels, which can be attributed to the declining price of lumber.

In FY 2001, the Timber Slash Program collected $139,590 in administrative fees. In addition, a total of $60,771 was collected and distributed to Montana State University's Extension Forestry Program.

Forest Practices

The Forest Practices Program provides information and education about forestry BMPs to private persons, corporations, and other agencies. The program also includes standards for all forest practices conducted in streamside management zones (SMZs). The program helps people comply with voluntary and mandatory measures that protect soil and water resources during timber harvesting operations. In FY 2001, the services listed in Table 20 were provided.

Table 20
Forest Practices Activities in FY 2001

BMP pre-harvest informational packages mailed to landowners	1,072
On-site consultations	68
Post-harvest evaluations	36
Alternative practices issued	42
SMZ enforcement actions taken	9

In cooperation with the Montana Loggers Association, the program conducted seven SMZ/BMP field workshops for loggers. This year's workshops provided education and information to 331 individuals across the state.

Community Forestry

Now in its eleventh year as a national program created in the 1990 Farm Bill, the Urban and Community Forestry Program continues to grow in Montana. The mission of the program remains the same: to have a viable program in every community in the state. However, the needs of Montana communities continue to change and expand. Wildland/urban interface, urban sprawl, and community planning have added a new complexity to program fundamentals like tree planting, maintenance, and removal. As more Montanans come to appreciate natural areas and resources within their cities and towns, the program becomes more and more relevant to them.

The program assists community leaders, volunteers, local governments, and the tree care industry with technical assistance, planning, funding for local programs, volunteer coordination, and education. The program works closely with several major partners, including federal agencies, Montana RC & D areas, the university system, and private organizations. Staff also participate in the Montana League of Cities and Towns, local tree and park boards, and volunteer organizations.

Major categories of assistance are shown in Table 21.

Table 21
Major Categories of Community Forestry Activities in FY 2001

Communities with active programs	64
Montana " Tree City USAs"[1]	27
Communities receiving technical assistance	117
Technology transfer activities (workshops, presentations, conferences, training sessions)	364

[1] "Tree City" is a national program through the Arbor Day Foundation.

Highlights of the Community Forestry Program for FY 2001 follow.

This year, for the first time, the Montana Urban and Community Forestry Program offered the Arbor Day Grants Program. Any community in the state wishing to celebrate Arbor Day could apply for a $150 grant to help with its event. Thirty-two communities participated in the program, and several held Arbor Day ceremonies for the first time. An Arbor Day celebration is one of the requirements for a community to receive Tree City USA designation.

Another significant accomplishment for the program this year was the addition of five Tree City USAs. Two of these communities were Tree City USAs previously, and three were new. The program offered a Tree City USA Reward Program, and these five Tree Cities each received a $500 grant for its program. Up to five more communities may be designated new Tree Cities next year.

For the first time since its inception, the Montana Tree Climbing Championship was held outside of Missoula. The Bozeman City Forestry Department hosted the event, which enjoyed a great turnout and increased interest in forming a statewide association for certified arborists in Montana.

The program continues to be active in the Rocky Mountain Chapter of the International Society of Arboriculture (ISA). This year, one of the DNRC community foresters is serving as the statewide representative to ISA, and another Montana resident is serving as the chapter secretary/treasurer.

OIL AND GAS CONSERVATION DIVISION

PHOTO COURTESY OF OIL AND GAS CONSERVATION DIVISION

OIL AND GAS CONSERVATION DIVISION

Prevent waste and provide for the conservation of crude oil and natural gas through regulation of exploration and production.

The quasi-judicial Board of Oil and Gas Conservation (BOGC) and its technical and administrative staff in the Oil and Gas Conservation Division are attached to the Department of Natural Resources and Conservation for administrative purposes. The board consists of seven members appointed to four-year terms by the governor. Members of BOGC during 2000 were:

David Ballard, Chair
Billings
Petroleum Geologist and Geophysicist

Denzil Young, Vice Chair
Baker
Attorney

George Galuska
Billings
Petroleum Geologist

Jack King
Billings
Landman

Allen Kolstad
Ledger
Farmer

Stanley Lund
Reserve
Rancher

Elaine Mitchell
Cut Bank
Accountant

The board's primary responsibilities are conservation of resources and prevention of waste through regulation of oil and gas exploration and production. In regulating these activities, the board relies heavily on its Oil and Gas Conservation Division staff. The division is headquartered in Billings, with field inspectors in Glendive, Plentywood, Roundup, and Shelby, and an administrative office in Helena.

The board's regulatory actions have four primary goals:

- Prevention of waste of oil and gas reserves
- Conservation of oil and gas through encouragement of maximum efficient recovery of those resources
- Protection of the correlative rights of the mineral owners, i.e., the right of each owner to recover its fair share of the oil and gas underlying its lands
- Prevention of harm to nearby surface or underground resources from oil and gas operations

It accomplishes these goals by issuing orders and deficiency reports, adopting rules, establishing spacing units, classifying wells, issuing drilling permits, and administering bonds (required to guarantee the eventual proper plugging of wells and surface restoration). BOGC also plugs and restores the surface of orphaned, abandoned, and problem wells, and is empowered to levy both civil and criminal fines. It maintains a library of well cutting samples and core samples in Billings. Since 1993, the board has certified companies to receive tax incentives for horizontal wells and enhanced recovery projects.

The Oil and Gas Conservation Division is supported from three main sources:

- Privilege and license tax (0.3 percent of the market value of crude petroleum and natural gas produced, saved, and marketed or stored within the state or exported from the state [less government royalties])
- An annual injection well fee
- Federal grant funds for the Underground Injection Control (UIC) Program.

The Underground Injection Control Program

BOGC has been administering the UIC Program in Montana since 1996, when primacy for the program was obtained from the U. S. Environmental Protection Agency (EPA).

The objective of the UIC Program is to protect underground sources of drinking water from contamination that could result from the improper disposal of liquid oil-field wastes. Operators apply for a UIC permit through the public notice and hearing process by notifying either the Billings or Helena Oil and Gas Conservation Office.

BOGC's jurisdiction applies to all but Indian lands. Program costs are covered by an annual operating fee of $200 per injection well and an EPA operating grant of approximately $105,000 per year.

The UIC Program regulates 860 injection wells. In 2000, UIC field inspectors performed 614 inspections of these wells. Most of these inspections were routine, periodic inspections (323) and the witnessing of mechanical integrity tests (268).

In 2000, there were 81 injection well violations, of which 78 were failure to maintain mechanical integrity. This number of violations is almost exactly the same as in 1999, when there were 80 injection well violations, but is significantly fewer than the 134 violations in 1998.

Activity Review

Montana's oil production increased approximately 2.7 percent, from 15.31 million barrels in 1999 to 15.72 million barrels in 2000. Oil production is shown by region in Figure 13, while Table 22 presents information about oil production over the past five years. Crude oil production since 1954 is illustrated in Figure 14.

Figure 13
Oil Production by Region in 2000
15,724,677 Barrels

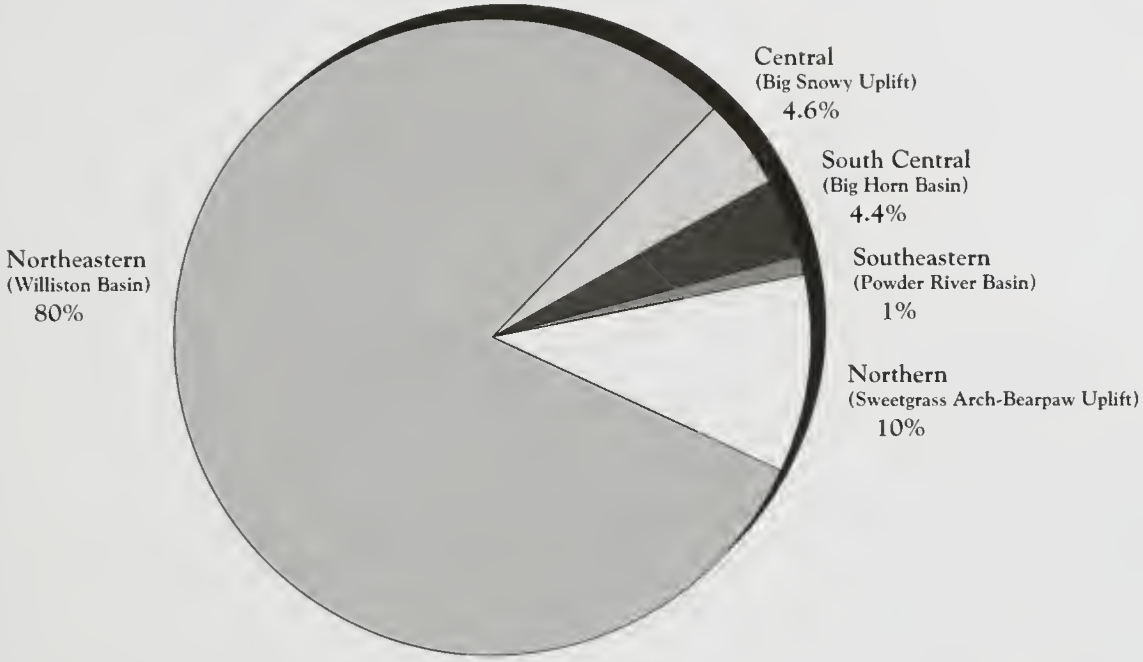
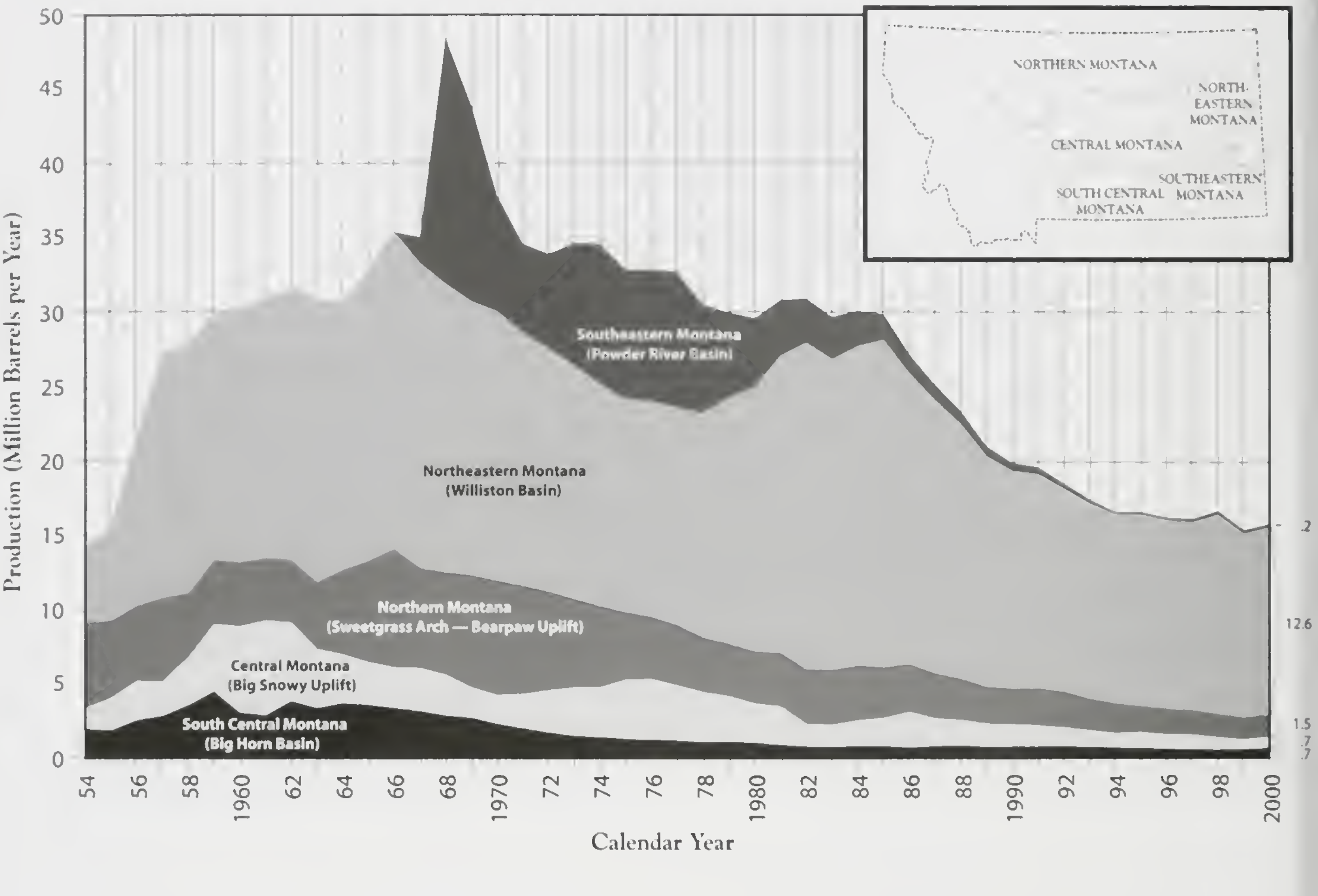


Table 22
Five-Year Summary of Oil Production in Montana

	1996	1997	1998	1999	2000
Oil Production in Barrels[1]					
Northern	1,740,101	1,691,820	1,588,778	1,499,545	1,537,068
Northeastern	12,697,755	12,667,200	13,385,264	12,361,321	12,555,582
Central	955,626	991,714	828,028	638,415	724,932
South Central	657,135	603,422	582,568	607,414	696,814
Southeastern	125,797	180,142	236,190	207,560	210,281
TOTAL	16,176,414	16,134,298	16,620,828	15,314,255	15,724,677
Number of Producing Oil Wells					
Northern	2,021	1,977	1,915	1,837	1,867
Northeastern	1,288	1,325	1,322	1,355	1,352
Central	242	236	236	230	232
South Central	121	118	119	120	129
Southeastern	49	73	82	70	76
TOTAL	3,721	3,729	3,674	3,612	3,656

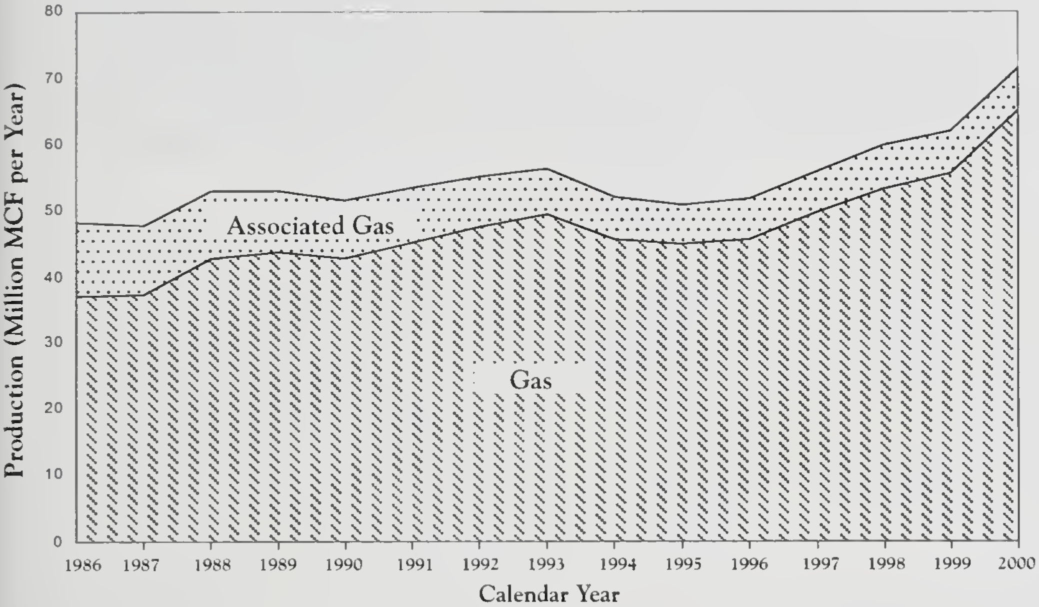
[1] Production figures do not include condensate or other natural gas liquids.

Figure 14
Crude Oil Production in Montana
(Million Barrels per Year)
1954-2000



Gas production increased from 62 million MCF in 1999 to 71.3 million MCF in 2000, setting a new record high. Figure 15 shows gas production from 1986 to 2000.

Figure 15
Natural Gas Production in Montana
(Million MCF per Year)
1986-2000



Well drilling increased from 457 wells drilled in 1999 to 476 in 2000. Figure 16 shows the wells permitted by region, while Table 23 presents the well information by county. There were 279 gas wells, 77 coal bed methane wells, and 58 new oil wells completed during 2000. Table 24 details permits and completions from 1996 through 2000.

Figure 16
Wells Permitted in 2000 by Region
(603 Wells Permitted)

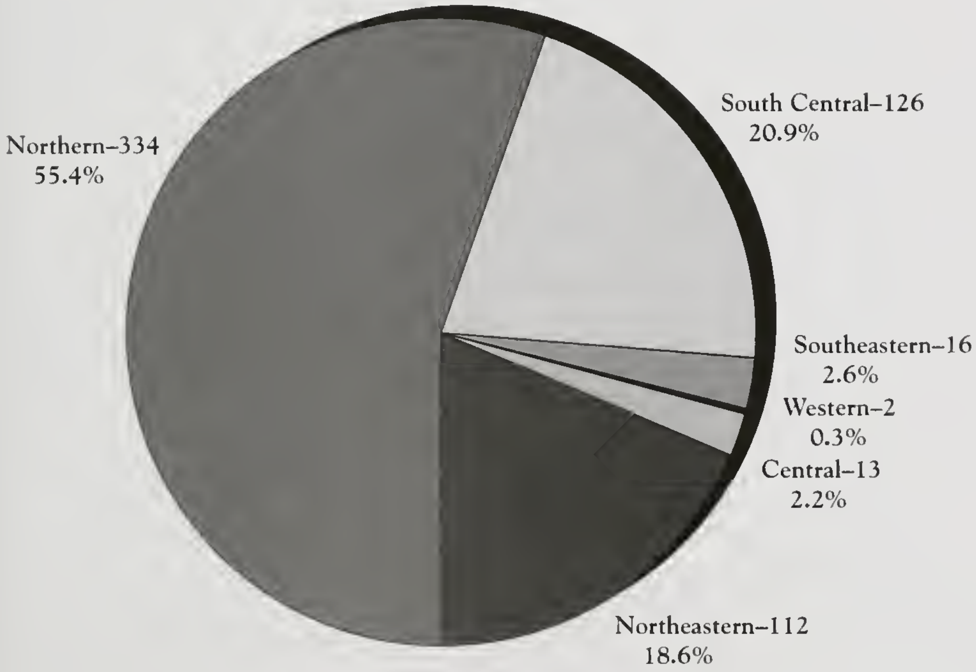


Table 23
Summary of 2000 Production and Drilling by County

	PRODUCTION			WELL COMPLETIONS				
County	Oil[1] (Barrels)	Associated Gas (Thousand Cubic Feet, or MCF)	Gas (Thousand Cubic Feet, or MCF)	Oil	Gas	Coal Bed Methane	Dry	Other
Big Horn	72,789	0	3,494,723	1	0	76	0	0
Blaine	221,138	0	17,076,382	0	55	0	10	0
Carbon	612,222	309,055	916,040	7	0	0	0	0
Carter	0	0	0	0	2	0	1	0
Chouteau	0	0	1,539,088	0	9	0	5	0
Custer	0	0	242,998	0	0	1	0	0
Daniels	6,686	24	0	0	0	0	0	0
Dawson	301,989	87,910	30	0	0	0	0	0
Fallon	5,710,101	1,693,077	6,141,247	25	46	0	0	2
Fergus	0	0	35,237	0	0	0	0	0
Gallatin	0	0	0	0	0	0	1	0
Garfield	21,296	1,283	0	0	0	0	2	0
Glacier	637,498	178,262	1,781,674	1	3	0	0	0
Golden Valley	0	0	56,599	0	0	0	0	0
Hill	790	0	11,620,378	0	28	0	14	0
Lewis and Clark	0	0	0	0	0	0	1	0
Liberty	97,787	21,666	1,747,619	0	6	0	2	0
McCone	33,051	0	0	0	0	0	0	0
Musselshell	259,353	19,374	0	0	0	0	5	0
Petroleum	34,827	3,948	0	0	0	0	0	0
Phillips	0	0	12,791,562	0	120	0	1	0
Pondera	145,358	0	362,695	1	0	0	1	0
Powder River	210,281	14,093	148,014	0	0	0	0	0
Prairie	53,666	10,008	1,792	0	0	0	0	0
Richland	2,626,353	2,125,945	997	6	0	0	0	0
Roosevelt	1,458,296	825,769	0	9	0	0	2	0
Rosebud	388,812	28,035	0	2	0	0	2	0
Sheridan	1,607,093	872,677	76,248	4	0	0	2	0
Stillwater	9,468	0	174,736	0	0	0	2	0
Sweet Grass	0	0	107,922	0	0	0	0	0
Teton	57,818	0	86,223	0	0	0	0	0
Toole	385,545	130,179	4,479,026	0	4	0	2	6
Valley	158,785	41,394	886,627	1	0	0	0	0
Wibaux	603,240	156,270	1,008,680	1	6	0	1	0
Yellowstone	25,331	0	0	0	0	0	0	0
TOTAL	15,739,573	6,518,969	64,776,537	58	279	77	54	8

[1] Total oil production shown on this table is greater than the total shown on Table 22, because this table (Table 23) includes condensate or other reported natural gas liquids.

Table 24
Five-Year Summary of Permits and Completions

Wells Permitted	1996	1997	1998	1999	2000
Oil Wells	138	207	109	80	132
Gas	89	247	302	329	344
Coal Bed Methane	0	31	48	156	113
Service	2	4	2	3	14
TOTAL	229	489	461	568	603
Wells Completed					
Oil Wells	73	75	72	27	58
Gas	65	224	144	234	279
Coal Bed Methane	0	10	21	111	77
Dry	52	74	66	63	54
Service	10	11	13	22	8
TOTAL	200	394	316	457	476

The 2000 activities reflect a continuing shift in interest to natural gas exploration and production, and a decreased interest in oil prospects. Coal bed methane and conventional gas development projects predominated new well activities.

Geophysical activities continued in 2000, with six contractors receiving permits for 23 seismic projects. The Williston Basin in northeastern Montana and the Chouteau and Hill County areas had most of these projects. A significant number of the permitted seismic projects involved 3-D techniques.

In 2000, approval was given for 27 new horizontal wells and 22 horizontal re-completions of existing vertical wells. BOGC approved one new secondary recovery project, thereby qualifying the incremental increase in production for a lower tax rate. One horizontal re-completion was certified for tax purposes.

Drilling permit activity increased, with 568 permits to drill issued in 1999 and 603 permits issued in 2000. BOGC's staff performed environmental assessments for each application involving private or state-owned land prior to permit issuance.

BOGC issued 177 orders during the year. Most of these orders authorized increased well density to accommodate in-fill drilling programs, established permanent spacing for horizontal wells and exception wells, delineated new fields, and allowed exceptions to existing field rules.

In 2000, BOGC spent $165,194 plugging orphaned and abandoned wells in Garfield, Glacier, Petroleum, Pondera, and Toole Counties. It also spent $134,490 on the emergency plugging of a leaking gas well in Havre. These projects were funded through grants from DNRC's Reclamation and Development Grants Program, interest allocated to the board from the Resource Indemnity Tax (RIT) Trust, and proceeds from forfeited plugging and restoration bonds.

RESERVED WATER RIGHTS COMPACT COMMISSION

PHOTO BY BILL GREIMAN

RESERVED WATER RIGHTS COMPACT COMMISSION

Working to "conclude compacts for the equitable division and apportionment of waters between the State and its people and the several Indian Tribes claiming reserved water rights within the state" (MCA 85-2-701) *and "between the State and its people and the federal government claiming non-Indian reserved waters within the state"* (MCA 85-2-703).

The Montana Legislature created the Reserved Water Rights Compact Commission (RWRCC) in 1979, the same year that it created the Montana Water Court. The purpose of the commission is to negotiate, on behalf of the State of Montana, with Indian Tribes and federal agencies claiming federal reserved water rights in the state. While they are being negotiated, the claims of the Tribes and federal agencies are suspended from adjudication in the Water Court. After being submitted for public comment in the specific area impacted, a negotiated settlement must be ratified by the Montana Legislature and the Tribal Council (in the case of Indian reserved rights) and approved by the appropriate federal authorities.

Montana was one of the first states to conduct such negotiations, and it is still the only state to do so using a commission. RWRCC is supported by an 11-member staff.

The Compact Commission

The Reserved Water Rights Compact Commission is made up of nine members who serve for four-year terms. One member is appointed by the Attorney General's Office, four by the Governor's Office, two by the Speaker of the House, and two by the President of the Senate. Current RWRCC members are:

Chris Tweeten, Chair
Helena
Chief Counsel, Attorney General's Office

Bob Thoft, Vice Chair
Stevensville
Rancher

Tara DePuy
Livingston
Park County Attorney

Gene Etchart
Glasgow
Rancher

Jack Salmond
Choteau
Rancher/Outfitter

Rep. Matt McCann
Harlem
Rancher

Rep. Cindy Younkin
Bozeman
Attorney

Sen. Bill Tash
Dillon
Agriculture/Rancher

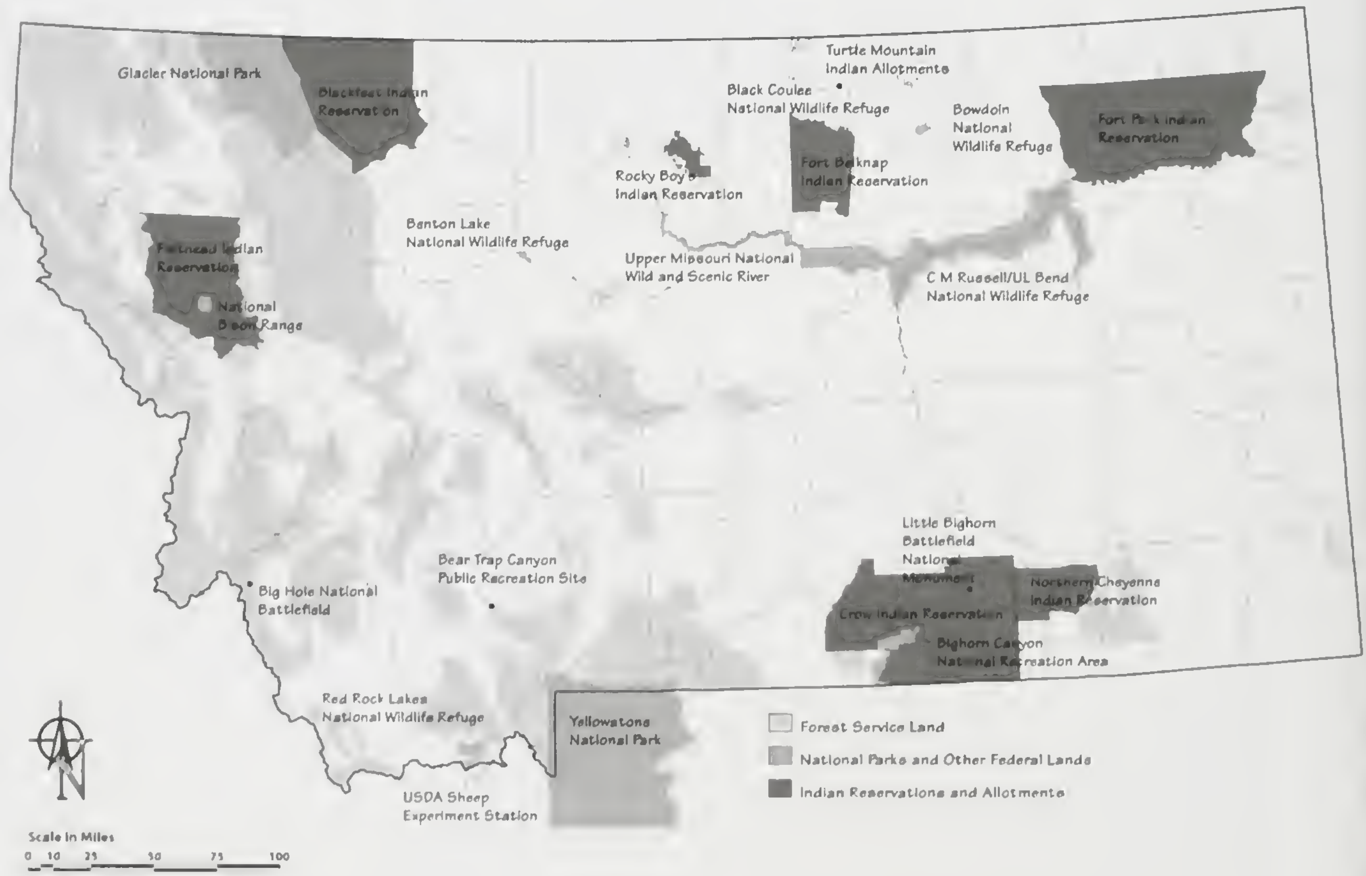
Sen. Bea McCarthy
Anaconda
Teacher

Federal Reserved Water Rights

A federal reserved water right is a right to water that was created when Congress or the President of the United States reserved land out of the public domain. Federal reserves in Montana are shown in Figure 17. The U. S. Supreme Court has ruled that enough water be reserved to meet the purposes for which the reserved lands were designated.

The date that the land was withdrawn and the reservation created is the priority date of a federal reserved water right. Reserved water rights for Indian reservations, for instance, go back to the 1800s. Federal reserved water rights do not have the same restrictions placed on them as on state appropriative rights. For example, a notice of appropriation or a beneficial use is not required to maintain a federal reserved right, and it is not lost due to non-use.

Figure 17
Location of Federal Reserves in Montana


Glacier National Park
Blackfeet Indian Reservation
Turtle Mountain Indian Allotments
Black Coulee National Wildlife Refuge
Bowdoin National Wildlife Refuge
Fort Peck Indian Reservation
Rocky Boy's Indian Reservation
Fort Belknap Indian Reservation
Flathead Indian Reservation
Benton Lake National Wildlife Refuge
Upper Missouri National Wild and Scenic River
C M Russell/UL Bend National Wildlife Refuge
National Bison Range
Little Bighorn Battlefield National Monument
Northern Cheyenne Indian Reservation
Crow Indian Reservation
Bighorn Canyon National Recreation Area
Bear Trap Canyon Public Recreation Site
Big Hole National Battlefield
Red Rock Lakes National Wildlife Refuge
Yellowstone National Park
USDA Sheep Experiment Station
N
Scale in Miles
0 10 25 50 75 100
Forest Service Land
National Parks and Other Federal Lands
Indian Reservations and Allotments

Completed Compacts

The commission has completed the 10 compacts listed in Table 25.

Table 25
Compacts Concluded by the
Reserved Water Rights Compact Commission

Compact	Date	Comments
Fort Peck - Assiniboine and Sioux Tribes MCA 85-20-201	May 1985	This compact contains a provision for water marketing by the Tribes, making federal legislation necessary. That federal legislation has not yet passed. This compact is currently under consideration by the Water Court.
Northern Cheyenne Tribe MCA 85-20-301 PL 102-374	September 1992	Included in the compact was a requirement that the federal government and the State of Montana contribute funds to repair and enlarge the unsafe Tongue River Dam, which has been completed. Planning and oversight of dam construction were handled by the DNRC Water Resources Division. This compact has been approved by the Water Court.
U.S. National Park Service Yellowstone National Park Glacier National Park Big Hole National Battlefield MCA 85-20-401	January 1994	This compact includes an article providing a controlled groundwater area to protect the hydrothermal system in Yellowstone National Park. It is now in the Water Court approval process.
U.S. National Park Service Little Bighorn Battlefield National Monument Bighorn Canyon National Recreation Area MCA 85-20-401	May 1995	Codified with the first compact with the National Park Service (above), this compact has been filed with the Water Court.
U.S. Bureau of Land Management (BLM) Wild and Scenic Missouri River Beartrap Canyon, Madison River MCA 85-20-501	March 1997	This compact settles the instream flow rights for two river segments. It has received final approval from BLM management and the U.S. Department of Justice. It will be submitted to the Montana Water Court.
U.S. Fish and Wildlife Service (FWS) Benton Lake National Wildlife Refuge Black Coulee National Wildlife Refuge MCA 85-20-701	March 1997	This compact settles the reserved water rights for two of the six national wildlife refuges. It has been approved by FWS and the U.S. Department of Justice. The Benton Lake Compact has been submitted to the Montana Water Court.
Chippewa Cree Tribe of the Rocky Boy's Indian Reservation MCA 85-20-601 PL 106-163	April 1997	This compact allocates 10,000 acre-feet per year (AFY) to the Tribe from water arising on the reservation. The federal authorization includes 10,000 AFY from water stored in Tiber Reservoir. The compact was approved by Congress and signed by the president in 1999. It has been submitted to the Montana Water Court for entry of a decree.

(Continued on page 74)

Table 25
Compacts Concluded by the Reserved Water Rights Compact Commission

(Continued from page 73)

Compact	Date	Comments
U.S. Fish and Wildlife Service (FWS) Red Rock Lakes National Wildlife Refuge MCA 85-20-801	April 1999	This compact settles the reserved water rights for another of the six national wildlife refuges for which federal reserved rights are claimed in Montana. The Red Rock Lakes settlement has been ratified by the legislature and approved by appropriate federal agencies. It will now be submitted to the Montana Water Court.
Crow Tribe MCA 85-20-901	June 1999 Special Legislative Session	This compact allocates 500,000 acre-feet per year (AFY) of the natural flow of the Bighorn River to the Crow Tribe. The U. S. Bureau of Reclamation will allocate 300,000 AFY of storage in Bighorn Lake to the Tribe. On the area north of the reservation known as the "Ceded Strip," the Tribe has the right to use 47,000 AFY from any water source on any lands acquired and held in trust for the Tribe. The compact provides protection for all current state and Tribal water users in the affected water basins. It authorizes the state to pay the Crow Tribe $15 million in exchange for the Tribe's dismissal of a coal severance tax lawsuit and for the state's portion of the cost-share for the water rights settlement. A Streamflow and Lake Level Management Plan for Bighorn River and Lake was negotiated and finalized by the parties in 2000, as required by the compact. The compact must go to Congress for approval, and it must pass a Crow Tribal referendum vote.
Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation MCA 85-20-1001	April 2001	Following almost 15 years of negotiations and technical work, the compact negotiated between the State of Montana and the Fort Belknap Indian Community was preliminarily approved by the Fort Belknap Community Council, passed the Montana Legislature, and was signed by the governor in April 2001. This compact allocates 645 cubic feet per second (cfs) from the Milk River to the Tribes, limited by the United States' share of the natural flow of the Milk River and the Tribal capacity to develop the water. It also quantifies the Tribal water rights in Peoples Creek, Beaver Creek, and Missouri River Basin 40EJ. When uses upstream of the reservation interfere with the Tribal water right, the Tribes will obtain water from the federal Milk River Irrigation Project. Eventual improvements to the project will mitigate the impact of Tribal water use. Funding and authorization of specific mitigation measures and Tribal projects must occur in federal legislation, which the parties will continue to negotiate.

Current Negotiations

Commission members and staff have been concentrating on negotiations concerning two Indian reservations and two federal agencies.

Indian

Blackfeet Tribe of the Blackfeet Reservation

In the early 1990s, the Blackfeet Tribe chose to litigate rather than negotiate. In November 1997, the Tribal chair informed the commission that the Tribe proposed to resume negotiations and presented a proposal for settlement. A stay of litigation was requested and was entered by the Water Court in December 1997. In January 1998, an initial negotiating session was held. The commission accepted the Tribe's request to resume negotiations, and a negotiating session was held in Helena in December 1998. Since then, staff meetings have been held to exchange technical information that will allow the State of Montana and the United States to evaluate the Tribe's proposal. Another negotiating session is anticipated in the fall of 2001.

Confederated Salish and Kootenai Tribes of the Flathead Reservation

In May 2000, the commission, Tribes, and United States had a negotiating session in Polson. In September 2000, the parties met in a negotiating session in Helena. At the second session, the Tribes presented a verbal proposal to begin settlement of the water rights on the reservation. It was agreed that the Tribes would prepare a written proposal, which was submitted to the commission in June 2001. The commission will review the proposal in preparation for the next negotiating session and will plan for public meetings to be held on the reservation to discuss the Tribal proposal.

Federal

U.S. Department of the Interior, Fish and Wildlife Service

National Wildlife Refuges

The U.S. Fish and Wildlife Service (FWS) claims federal reserved water rights for six national wildlife refuges in Montana. A compact for Benton Lake National Wildlife Refuge and Black Coulee National Wildlife Refuge passed the 1997 legislature and was signed by the governor. It was approved by the federal parties in July 1997, and the Benton Lake portion has been filed with the Water Court. A settlement agreement for Red Rock Lakes was ratified by the 1999 Montana Legislature and has been approved by the appropriate federal agencies. It will also be filed with the Montana Water Court.

Negotiations with FWS on the three remaining units (listed below) are continuing.

- Bowdoin National Wildlife Refuge
- Charles M. Russell/UL Bend National Wildlife Refuge
- The National Bison Range

U.S. Department of Agriculture, Forest Service

National Forests

Technical work is continuing under Phase III of the Memorandum of Understanding between the commission and the U.S. Forest Service (USFS). USFS has identified 750 streams where it desires to protect natural flows, and the commission staff is evaluating the potential impact on existing water rights. Potential future water requirements are being identified. Staff members have attended regular meetings of several local watershed coordination groups in an effort to inform the public about the negotiations. The commission has asked the Forest Service to identify all situations where it believes it has the power, under its land use authority, to stipulate bypass flows or an amount of instream flow that water users may be required to leave in the stream on national forest lands. The commission recently proposed an alternative approach for settlement to USFS and anticipates a negotiating session this year. The commission staff continues to track activities in Idaho, Wyoming, and Colorado regarding USFS federal reserved water rights.

Other Reserved Rights

Turtle Mountain Band of Chippewa

The Turtle Mountain Band of Chippewa owns numerous small allotments scattered throughout Montana. The commission has been contacted by the Tribal chairman and the Tribal attorney requesting that negotiations begin. Once an official letter has been received, the State of Montana and the Tribe will request the appointment of a federal negotiating team.

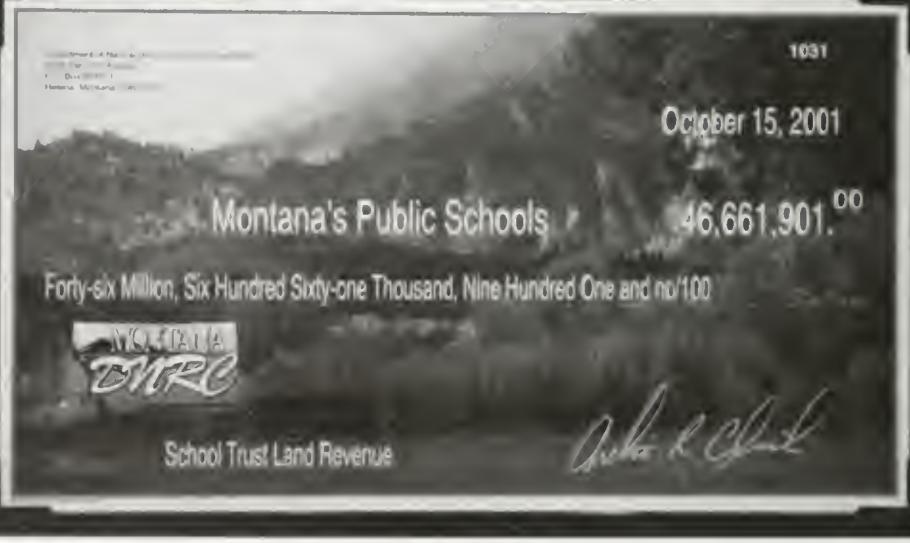
U.S. Department of Agriculture, Forest Service

Negotiators have not begun to discuss the reserved rights of the USFS Agricultural and Sheep Experiment Stations at this point.

TRUST LAND MANAGEMENT DIVISION

(LEFT) TRAVEL MONTANA
(RIGHT) TRUST LAND MGMT. DIVISION

(LEFT) GARY FRANK
(RIGHT) HOYT RICHARDS



1031

October 15, 2001

Montana's Public Schools 46,661,901.00

Forty-six Million, Six Hundred Sixty-one Thousand, Nine Hundred One and no/100

MONTANA DNRC

School Trust Land Revenue

PHOTO BY DAN BUSHNELL

TRUST LAND MANAGEMENT DIVISION

Manage the State of Montana's trust land resources to produce revenues for the trust beneficiaries while considering environmental factors and protecting the future income-generating capacity of the land.

Overview

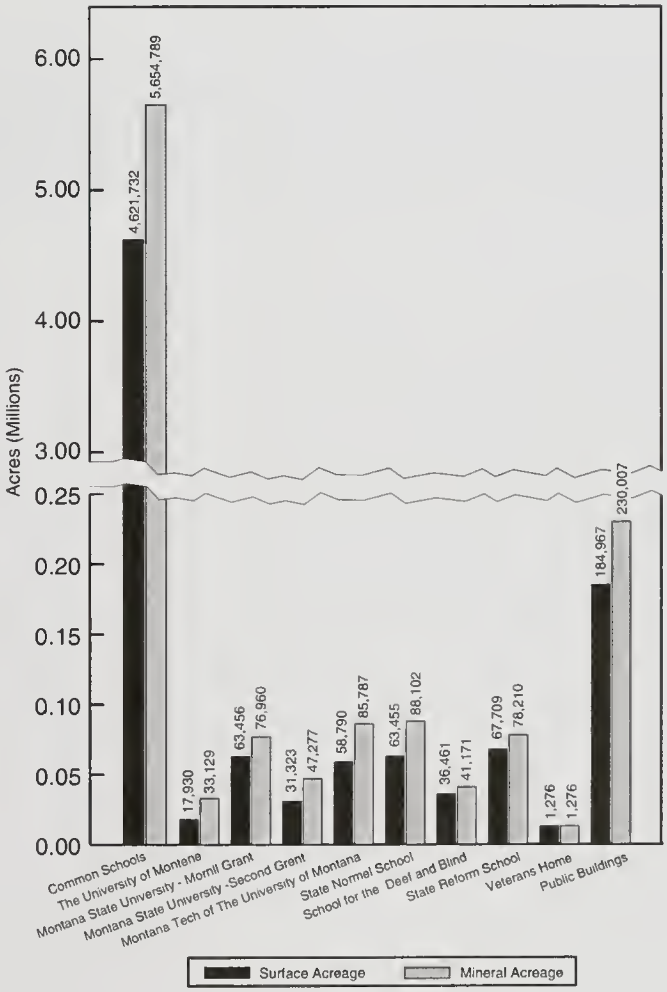
General background information on the Trust Land Management Division is available on the department's website:

www.dnrc.state.mt.us/trust/tlandhome.htm

History

By the Enabling Act approved February 22, 1889, the Congress of the United States granted to the State of Montana, for common school support, sections sixteen and thirty-six in every township within the state. Some of these sections had been homesteaded, some were within the boundaries of Indian reservations, and yet others had been otherwise disposed of before passage of the Enabling Act. To make up for this loss, and in lieu thereof, other lands were selected by the State of Montana.

Figure 18. Current Land Ownership

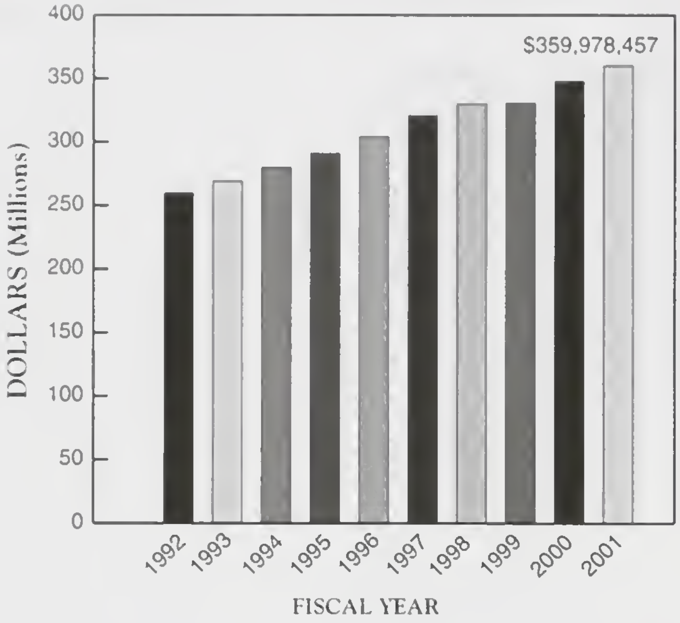


The Enabling Act and subsequent acts also granted acreage for other educational and state institutions, in addition to the common schools. The original common school grant was for 5,188,000 acres. The additional acreage provided for other endowed institutions included 668,720 acres, for a total of 5,856,720 acres. The total acreage figure (see Figure 18) fluctuates through the years due to land sales and acquisitions. Mineral acreage now exceeds surface acreage because the mineral estate has been retained when lands are sold. Surface acreage at the end of FY 2001 totals over 5.1 million acres; mineral acreage exceeds 6.3 million acres.

The Permanent Fund

The Enabling Act provided that proceeds from the sale and permanent disposition of any of the trust lands, or part thereof, shall constitute permanent funds for the support and maintenance of the public schools and the various state institutions for which the lands had been granted. The Montana Constitution provides that these permanent funds shall forever remain inviolate, guaranteed by the State of Montana against loss or diversion. These

Figure 19. Permanent Fund Balance



funds are often referred to as "nondistributable." The permanent trust balance is shown in Figure 19; Table 26 shows nondistributable receipts for trust revenue for FY 2001 and the current balance of each permanent trust fund.

Interest and Income

The Enabling Act further provided that rentals received on leased lands, interest earned on the permanent funds arising from these lands, interest earned on deferred payments on lands sold, and all other actual income shall be available for the maintenance and support of such schools and institutions. These funds are referred to as "distributable"; receipts for FY 2001 trust revenue are detailed in Table 26.

Table 26
Revenue Generated for the Trusts
and Permanent Fund Balances in Fiscal Year 2001

Trust	Distributable Revenue	Permanent Fund (Nondistributable Revenue)	
	2001 Revenue	2001 Revenue	Current Balance
Common Schools	$46,661,901	$13,926,563	$334,901,982
Other Trusts			
The University of Montana	$190,066	$13,303	$1,479,316
Montana State University - Morrill Grant	$412,441	$39,070	$2,884,528
Montana State University - Second Grant	$776,972	$280,065	$6,766,257
Montana Tech of The University of Montana	$688,764	$406,570	$3,464,229
State Normal School	$545,187	$27,920	$5,475,213
School for the Deaf and Blind	$276,492	$260,613	$2,709,972
State Reform School (Pine Hills)	$383,619	$178,082	$2,280,218
Veterans Home	$7,825	$0	$16,742
Public Buildings	$2,582,173	NA	NA

Distribution of Revenues

Each section of state trust land is assigned to a specific trust. Distribution of revenues is handled in three different ways, as explained in the following subsections, depending on the section of trust land that generated the revenue.

The Trust Land Management Division also administers land for some other state agencies, in addition to state trust land. Revenue generated from that land is transferred directly to the state agency.

The Trust Land Management Division is funded by a combination of trust revenues.

Common School Trust

The distribution of revenues generated from common school trust land is illustrated in Figure 20. From the distributable receipts, a small percentage is used to fund the Resource Development Account and the Timber Sale Account. Ninety-five percent of the remaining distributable revenue is distributed yearly to the state General Fund for use by the public schools of the state. The other 5 percent, together with nondistributable revenue, comprise the Permanent Fund. The interest earned on the Permanent Fund is also distributed to the General Fund for use by the public schools, with the exception of 5 percent, which is returned to the Permanent Fund for reinvestment.

Trusts Other Than the Common School Trust

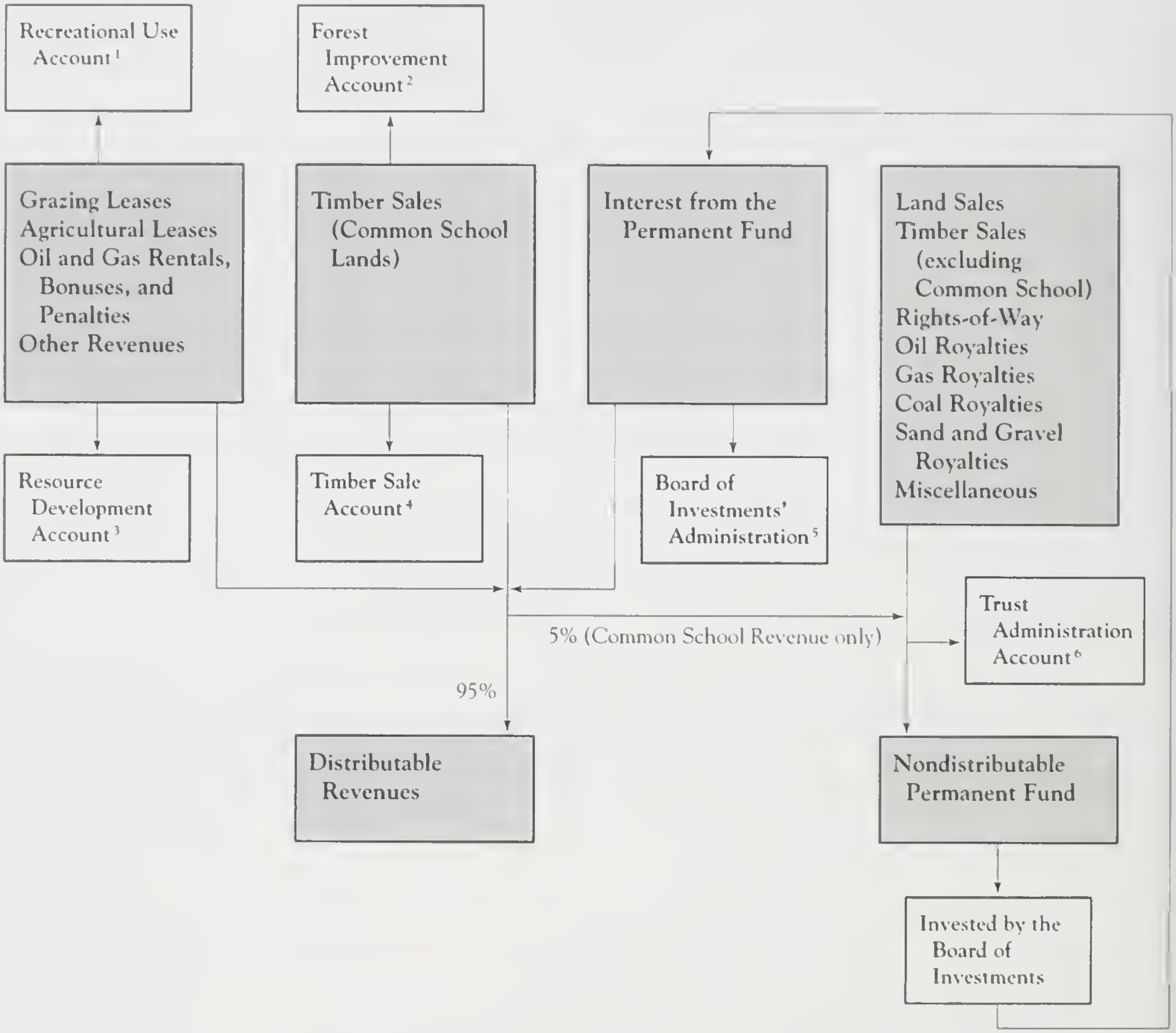
Distribution of revenues to the other trusts is similar. A small percentage goes to the Resource Development Account, but no funds go to the State Timber Sale Account. All of the remaining distributable receipts go directly to the trust recipient. Included in "other" trusts are:

- The University of Montana
- Montana State University - Morrill Grant
- Montana State University - Second Grant
- Montana Tech of The University of Montana
- State Normal School (Montana State University-Billings and Western Montana College of The University of Montana)
- School for the Deaf and Blind
- State Reform School (Pine Hills)
- Veterans Home

Public Buildings

Revenue received on public buildings trust land is all distributed to the Department of Administration. There is no permanent fund for the public buildings trust.

Figure 20. Distribution of Revenues from Common School Trust Land


Recreational Use Account[1]
Forest Improvement Account[2]
Grazing Leases
Agricultural Leases
Oil and Gas Rentals, Bonuses, and Penalties
Other Revenues
Timber Sales (Common School Lands)
Interest from the Permanent Fund
Land Sales
Timber Sales (excluding Common School)
Rights-of-Way
Oil Royalties
Gas Royalties
Coal Royalties
Sand and Gravel Royalties
Miscellaneous
Resource Development Account[3]
Timber Sale Account[4]
Board of Investments' Administration[5]
Trust Administration Account[6]
5% (Common School Revenue only)
95%
Distributable Revenues
Nondistributable Permanent Fund
Invested by the Board of Investments

1. The Recreational Use Account is funded by $1.50 from each General Recreational Use License sold.
2. The Forest Improvement Account is funded by additional fees assessed on individual timber sales.
3. The Resource Development Account is limited to a small percentage of distributable receipts excluding timber sale income. The purpose of the account is to invest in improving and developing state trust lands in order to increase the income-producing capacity of the lands.
4. The State Timber Sale Account, comprised of timber sale revenue, contains that amount appropriated by the legislature each year to be used specifically for timber sale preparation and documentation.
5. The Board of Investments' administration of the Permanent Fund is funded by a portion of the annual interest generated from those funds.
6. The Trust Administration Account was enacted by the 1999 Legislature. This funding utilizes a portion of the annual nondistributable revenue stream not to exceed 1 1/8 percent of the Permanent Fund balance.

Purpose

The purpose of the Trust Land Management Division is to administer and manage the state trust timber, surface, and mineral resources for the benefit of the common schools and the other endowed institutions in Montana, under the direction of the Board of Land Commissioners. The board, which is often called the "State Land Board," consists of Montana's top elected officials:

- Judy Martz, Governor
- Linda McCulloch, Superintendent of Public Instruction
- Bob Brown, Secretary of State
- Mike McGrath, Attorney General
- John Morrison, State Auditor

The division is divided into four primary programs: agriculture and grazing management, forest management, minerals management, and special use management. Program administration, direction, oversight, and support are provided by staff and program specialists located in Helena and Missoula. On-the-ground management is provided by field personnel located throughout the state.

The department's obligation is to obtain the greatest benefit for the school trusts. The greatest monetary return must be weighed against the long-term productivity of the land to ensure continued future returns to the trusts. Total revenues generated by the Trust Land Management Division over the last five years are listed by activity in Table 27. This table contains not only trust revenues, but also those revenues collected for other state entities, revenues appropriated to fund a portion of the division's programs, and other miscellaneous revenues collected by the division.

The Trust Land Management Division distributed over $52 million in earnings and interest directly to the public schools and other entities in FY 2001. In addition, the program generated over $15 million in nondistributable revenue in FY 2001, increasing the balance to $359,978,457.

Return on Asset Value Report

Senate Bill 411, passed by the 1999 Legislature and codified at MCA 77-1-223-225, requires the Board of Land Commissioners to provide annual reports regarding the average return of revenue on asset value to trust beneficiaries of forested lands. This report is for forested lands classified by MCA 77-1-401 as Class 2 lands that are held in trust for the beneficiary. "*The report must include for each beneficiary:*

(1) the total acreage of forested land held in trust;
(2) a summary of the asset value of the forested tracts held in trust;
(3) a calculation of the average return of revenue on asset value for the forested tracts held in trust; and
(4) a listing by each department land office of the total acreage of forested land administered for the trust beneficiary and a calculation of the average return of revenue on asset value for lands designated to the trust beneficiary."

The *Report on Return on Asset Value by Trust and Land Office for Classified Forested Lands* is available upon request.

Table 27
Five-Year Summary of Revenue Generated (by Activity)

Activity	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Agriculture and Grazing Management					
Grazing leases	$3,747,968	$4,113,142	$4,608,145	$4,494,637	$5,364,305
Agricultural leases	10,046,553	9,318,295	8,644,162	9,331,416	8,654,425
Total	$13,794,521	$13,431,437	$13,252,307	$13,826,053	$14,018,730
Forest Management					
Timber sales	$5,761,809	$6,259,332	$5,905,196	$10,591,657	$6,596,578
Minerals Management					
Oil and gas revenues					
Rentals/bonuses/penalties	$1,971,545	$2,400,550	$2,083,626	$2,966,285	$3,098,515
Royalties	3,618,924	2,810,151	2,200,764	3,684,595	6,212,546
Seismic exploration	41,705	29,378	13,825	11,075	6,533
Aggregate minerals					
Rentals	100	100	250	250	600
Royalties	217,660	208,845	213,185	245,693	225,019
Coal					
Rentals/bonuses	38,899	46,290	44,371	44,371	6,261,360
Royalties	6,255,318	2,759,073	2,312,533	4,649,634	4,944,170
Other minerals					
Rentals/penalties	86,804	73,081	49,412	32,246	20,543
Royalties	24,277	23,006	8,439	8,878	8,079
Total	$12,255,232	$8,350,474	$6,926,405	$11,643,027	$20,777,365
Special Use Management					
Rights-of-way	$1,484,511	$141,989	$157,231	$279,014	$218,456
Cabin and homesite leases	482,584	553,095	616,757	718,290	790,030
Land sales	323,135	18,844	254,917	261,884	0
Special use leases and licenses	437,354	418,361	412,213	609,193	509,071
Recreational use					
General licenses	306,755	340,107	348,298	381,740	387,016
Special recreational use licenses	109,376	65,621	86,165	98,948	104,206
Total	$3,143,715	$1,538,017	$1,875,581	$2,349,069	$2,008,779
Other					
Trust and legacy interest	$23,608,293	$25,820,410	$26,024,064	$25,620,337	$26,012,671
Other revenues	2,113,233	867,351	770,200	847,978	838,994
Total	$25,721,526	$26,687,761	$26,794,264	$26,468,315	$26,851,665
TOTAL	$60,676,803	$56,267,021	$54,753,753	$64,878,121	$70,253,117

Agriculture and Grazing Management

The Agriculture and Grazing Management Bureau supervises the management and leasing of approximately 10,000 agreements for crop and rangeland uses on 4.9 million acres of school trust lands throughout the state. These duties are accomplished by administrative staff and specialists located in the department's Helena office and by staff located in field offices statewide.

Surface Leasing

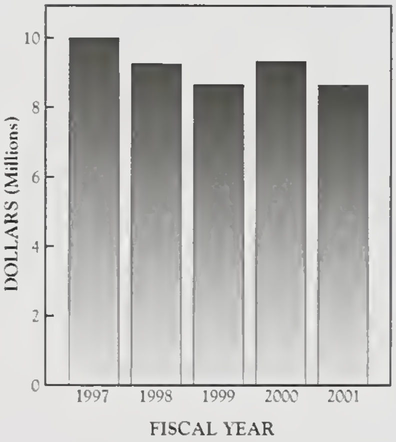
The program is responsible for the administrative functions associated with maintaining surface lease agreements. Each year, responsibilities include processing approximately 1,000 lease renewals; advertising, competitively bidding, and issuing approximately 50 new leases; reviewing and processing assignments, subleases, pasturing agreements, custom farming agreements, pledges, and mortgages; and collecting, verifying, and posting rentals and fees.

Agricultural Lands

Currently 3,000 agreements include agricultural use of state trust lands. Crops raised on these lands are primarily dryland hay and small grains, but also include irrigated grain crops, corn, sugar beets, potatoes, canola, safflower, alfalfa seed, and native grass seed.

In FY 2001, revenues totaling $8,654,425 were received from agricultural leasing (see Figure 21). The majority of the leases are on a crop-share basis with the minimum share of 25 percent set by statute. In addition to receiving rental payments from lessees, the state participates in and receives farm program payments from the U. S. Department of Agriculture (USDA) Farm Service Agency, as authorized under the Agricultural Market Transition Act of 1996. For FY 2001, this amount exceeded $4,300,000 for production flexibility contracts, lands enrolled in the Conservation Reserve Program (CRP), market loss assistance payments, and loan deficiency payments.

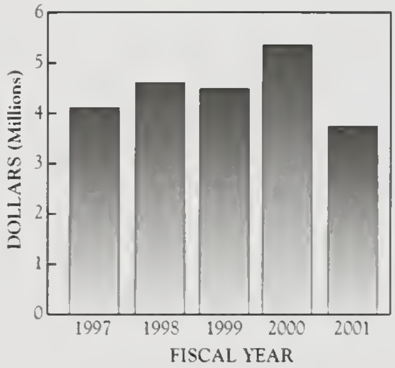
Figure 21.
Agricultural Revenue



Grazing Lands

Approximately 8,500 agreements include grazing use of trust lands. The 4.3 million acres of classified grazing and forest lands have an estimated carrying capacity of 1,090,000 animal unit months (AUMs). The minimum rental rate for grazing leases is set by a formula which includes the average weighted price for beef cattle sold in Montana during the previous year. In FY 2001, grazing leases generated $5,364,305 (see Figure 22).

Figure 22.
Grazing Revenue



Land Management

The program manages the agricultural and grazing resources on the lands administered by the bureau. This responsibility includes evaluation and assessment of range and cropland condition; compliance with the Montana Environmental Policy Act (MEPA); administration of archeological, paleontological, and historical properties on state trust land; investigations of lease noncompliance; participation in the Federal Farm Program; and oversight of water developments, water rights, and improvement projects such as range renovations and resource development.

During FY 2001, bureau staff developed a new bioengineered stream bank restoration method using temporary concrete blocks. An eroding stream bank terrace is lowered by excavation to a floodplain elevation. Willows are planted in salvaged topsoil on the new floodplain. Concrete blocks are placed along the floodplain bank to protect the young willows from erosive spring flows. After the willows become established with substantial root development, the concrete blocks are removed for use at another site. This method provides a stream bank restoration alternative without the use of heavy rock for permanent stream bank armoring.

Forest Management

The Forest Management Bureau (FMB) oversees forested, state-owned trust lands to provide income to the various school trusts. Income is derived from the sale of forest products.

The bureau also provides program direction and support to the area land offices. That support is provided in several subprograms or areas of expertise: forest land management, planning, hydrology, soils, economics, wildlife, and fisheries. Support and program direction are offered in several different ways: the development of resource management standards, site-specific review and recommendations for proposed management activities, and participation as members of interdisciplinary teams that develop land management proposals.

The area land offices have primary responsibility for on-the-ground management activities. With assistance from the Forest Management Bureau, they conduct environmental reviews of proposed management activities, prepare contracts for those activities, and complete the necessary field work.

The State Forest Land Management Plan (SFLMP), approved by the State Land Board in June 1996, guides the management of the forested trust lands. This guidance is provided in the form of general management philosophy and specific resource management standards. The strategic guidance provided by SFLMP is summarized in this excerpt:

> *Our premise is that the best way to produce long-term income for the trust is to manage intensively for healthy and biologically diverse forests. Our understanding is that a diverse forest is a stable forest that will produce the most reliable and highest long-term revenue stream. Healthy and biologically diverse forests would provide for sustained income from both timber and a variety of other uses. They would also help maintain stable trust income in the face of uncertainty regarding future resource values. In the foreseeable future timber management will continue to be our primary source of revenue and primary tool for achieving biodiversity objectives.*

Forest Improvement

The program uses fees from harvested timber to improve the health and productivity of trust forests. Uses of these fees authorized by statute include disposal of logging slash, reforestation, acquiring access and maintaining roads necessary for timber harvest, other treatments necessary to improve the condition and income potential of state forests, and compliance with other legal requirements associated with timber harvest. Specific activities include piling of logging slash, prescribed burning, site preparation, seed collection, seedling production, tree planting, thinning, genetic tree improvement, erosion control, and culvert replacement.

In FY 2001, the activities listed in Table 28 were undertaken to improve the health and productivity of forested state trust lands.

Table 28
Forest Improvement Activities in FY 2001

Regeneration surveys	129	acres
Tree planting	840	acres
Net maintenance[1]	893	acres
Precommercial thinning (contract)	2,357	acres
Precommercial thinning (seasonal crews)	8	acres
Noxious weed spraying (seasonal crews)	2,605	acres
Herbicide application	600	acres
Brush piling—excavator	72	acres
Brush piling—dozer	186	acres
Pile burning (seasonal crews)	1,176	acres
Broadcast burning	519	acres
Jackpot burning	500	acres
Hand brush work	349	acres
Tree improvement areas managed	16	acres
Road maintenance	115	miles

1. Net maintenance includes replacing, maintaining, or removing seedling netting.

Forest Product Sales

The program incorporates all activities and expenditures required to grow, harvest, and sell forest products from state trust lands efficiently. Activities within this program include field layout of timber sales; development of sale prescriptions; MEPA documentation; preparation of sale contracts, prospectuses, and notices; both field and office administration of timber sales; and sale billing and accounting. These responsibilities are shared among field foresters, area staff, and bureau staff.

Salvage after the Fires of 2000

The fires of 2000 scorched almost 1 million acres of land in Montana, with more than 300,000 acres burned in the Bitterroot Valley. When the smoke cleared, forest management personnel mobilized quickly to implement rehabilitation measures (grass seeding, installation of culverts and erosion barriers, etc.) and salvage fire-killed timber in the Bitterroot Valley's Sula State Forest. The logging activity started in early December, and during the next three months 133,750 tons (or 17.5 million board feet) of logs were removed from the project area. The logging

Figure 23.
Timber Volume Sold

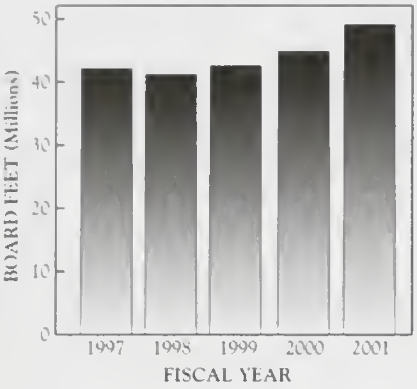


Figure 24.
Timber Revenue Received

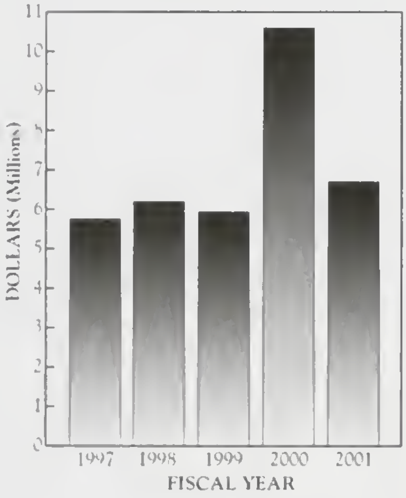
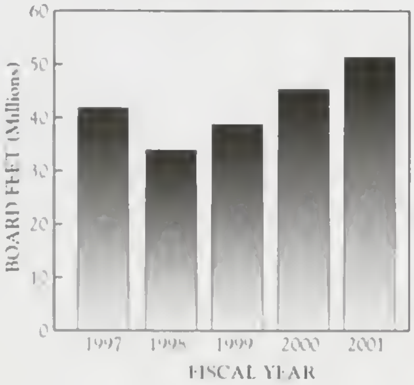


Figure 25. Timber Volume
Prepared for Sale



resulted in timber revenues of $2,890,000 being distributed to various school and public building trust funds, and $570,700 in forest improvement collection funds to be used for reforestation activities.

In the summer of 2001, approximately 23,850 tons (or 3.67 million board feet) that remained were removed at an estimated value of $570,670 for the school trusts and $101,766 for forest improvement.

Five additional salvage sales have been prepared for sale in the fall of 2001 for a total volume of about 3 million board feet. The harvest of these sales is expected to take place in the winter of 2001-2002.

Timber Harvest

The estimated annual sustainable harvest from forested trust lands is 42.164 million board feet. That figure is the department's annual sales target, until the sustained yield study conducted in 1996 is revisited. Review is required at least once every 10 years, according to MCA 77-5-221-223. Actual sales in FY 2001 were 49.1 million board feet (see Figure 23). The increase in FY 2001 was due to salvage efforts following the fires of 2000 in the Bitterroot Valley.

During the year, $6,596,578 in revenue was generated from the harvest of timber (see Figure 24).

Timber Sales and Permits

Also in FY 2001, 21 timber sales and 56 timber permits were prepared for a total of 51.4 million board feet (see Figure 25). All timber sales and permits are developed, analyzed, and reviewed in the field by foresters and resource specialists to ensure that those sales comply with all applicable laws, policies, and management direction. At the end of FY 2001, DNRC had 54.2 million board feet under contract with an approximate value of $10 million.

Application of State Forest Land Management Plan

In FY 2001, the Forest Management Bureau and field offices spent considerable time developing and implementing strategies and analytical techniques for applying the State Forest Land Management Plan to DNRC projects. The development of implementation guidance and monitoring procedures, as well as the training of personnel, are ongoing processes.

Inventory

The program is responsible for the collection and analysis of forest resource inventory data in Montana. The program provides a current, comprehensive inventory of the timber resources on 714,600 acres of forested land administered by the Department of Natural Resources and Conservation. Stand-level inventory maps have been drawn and resource data collected for 1,173,500 forested and nonforested acres of state trust land. The development and maintenance of a geographic information system (GIS) used to support planning for forest management activities and environmental analyses is another responsibility of this program.

In FY 2001, the inventory program added 150,500 acres to the stand-level inventory and updated the existing stand inventory maps and data for 25,540 acres. GIS provided analysis and maps for all Sula State Forest salvage and restoration timber sales. GIS also supported 11 other forest management projects. In addition, contractors and interns digitized 191,500 acres of stand inventory polygons for the Plains, Anaconda, Hamilton, and Clearwater Unit Offices.

Old Growth Issue

Since the State Forest Land Management Plan (SFLMP) was adopted in 1996, FMB has been involved in developing and implementing guidelines for meeting SFLMP's old growth commitments. The initial biodiversity/old growth guidelines, which were consistent with direction from SFLMP and adopted by the bureau in 1998, have been a source of ongoing controversy.

To deal with the controversy and solicit public input, FMB issued supplemental old growth guidance early in the fiscal year. The public was asked to consider and comment on various options. FMB also formed a technical review team made up of four scientists, three from the University of Montana and one from the University of Wyoming.

Subsequently, in February 2001, a District Court judge found that the 1998 biodiversity guidelines were an accurate interpretation of SFLMP, but also found that the department needed to go through a formal rule-making process under the Montana Administrative Procedures Act (MAPA) to implement the guidelines. At about the same time, Senate Bill 354 was signed into law, requiring DNRC to receive full market value for any old growth set-asides (among other categories, such as wildlife management areas and open space).

DNRC then adopted temporary rules under MAPA that it believed would satisfy both the new legislation and the judge's ruling. However, the judge determined that the temporary rules did not comply with his original order, thus re-enjoining a number of timber sales that had previously been affected.

Therefore, at this time, FMB is working on permanent rules for implementing SFLMP. There will be ample opportunities for the public to comment through formal public hearings and comment periods. FMB expects to complete the rules during this fiscal year.

Minerals Management

The Minerals Management Bureau is responsible for leasing, permitting, and managing approximately 2,736 oil and gas, metalliferous and non-metalliferous, coal, and sand and gravel agreements on 6.3 million acres of school trust land and more than 100,000 acres of other state-owned land throughout Montana.

General background information on bureau activities is available on the department's website:

www.dnrc.state.mt.us/trust/mmb.htm

A calendar of key lease sale activities and dates is posted, and lease sale lists and sale results are available for viewing or downloading.

Mineral Leasing

The program is responsible for reviewing and processing all mineral lease and permit applications; advertising, competitively bidding, and issuing new leases; reviewing and approving lease assignments; and collecting, verifying, and posting lease rentals and production royalties.

Revenues received in FY 2001 are listed in Table 29; the relative percentage derived from each mineral type is illustrated in Figure 26.

Figure 26. Total Mineral Revenue by Mineral Type

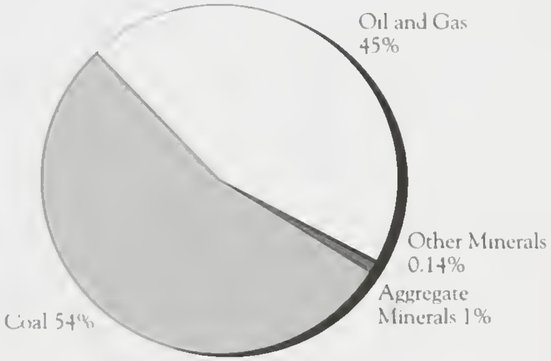
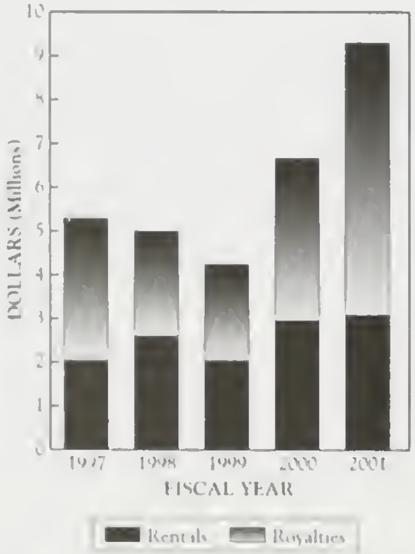


Table 29
Revenues Received from Minerals in FY 2001

Oil and Gas	Rentals/bonuses/penalties	$3,098,515
	Royalties	6,212,546
	Seismic exploration	6,533
Aggregate Minerals	Rentals	600
	Royalties	225,019
Coal	Rentals/bonuses	6,261,360
	Royalties	4,944,170
Other Minerals	Rentals/penalties	20,543
	Royalties	8,079
	TOTAL	$20,777,365

Oil and Gas Leasing

Figure 27. Oil and Gas Revenue (excluding Seismic Exploration)



The program is responsible for the leasing and monitoring of 2,582 oil and gas leases, 534 of which are currently productive. The number of oil and gas leases managed is up 6.1 percent, while the number of currently producing leases remained constant, compared to FY 2000. Activities related to existing leases include collecting, verifying, and posting rental, royalty, delay drilling, and shut-in payments; reviewing and approving assignments and tracking working interest ownership; reviewing and preparing for approval communitization agreements and unit operating agreements; and coordinating with field offices the review and approval of all proposed physical operations on state leases. In addition, four oral auctions of new oil and gas leases are prepared and conducted each year.

In FY 2001, 889,786 barrels of oil were produced; 6,294,741 MCF of gas and 443,533 gallons of condensate were also produced. Revenues received over the last five fiscal years are shown in Figure 27. Oil production declined 3.7 percent from FY 2000. However, the increase in average price from $20.21 per barrel in FY 2000 to $26.76 per barrel in FY 2001 accounted for the significant increase in oil royalty revenue. Gas production in FY 2001 increased 24.6 percent, while the price increased 104.1 percent, compared to FY 2000, which resulted in a significant increase in royalty revenue.

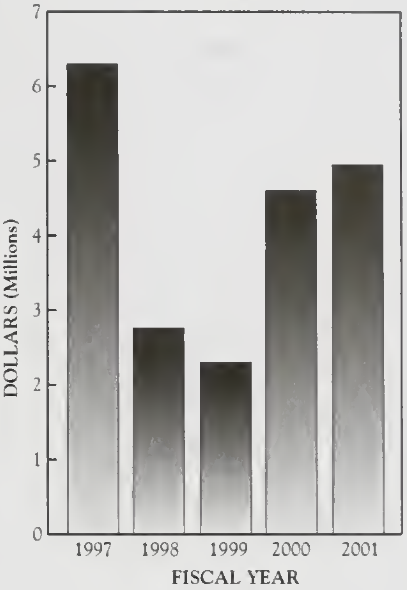
Other Mineral Leasing

The program also administers a wide variety of leases—including metalliferous and non-metalliferous leases, coal leases, gravel permits, and land use licenses for non-mechanized prospecting—for all other mineral activity on state trust land. Royalties from coal increased 6.3 percent compared to FY 2000. The volume mined remained stable, while the average price increased 4.2 percent. The volume mined can vary significantly from year to year, as mining activity moves onto or off state land within the normal sequence of mining operations. A five-year summary of coal royalties is shown in Figure 28. Royalties and rentals are also collected for minerals such as bentonite, clay, gold and associated minerals, peat, and shale.

In FY 2001, the bureau worked with the U.S. Bureau of Land Management to complete a joint environmental assessment covering lease proposals on both federal and school trust land immediately adjacent to the existing Spring Creek Coal Mine in Big Horn County. The bureau subsequently offered the school trust lands for lease and received bonus and first year rental revenue totaling $6,216,990.

As with oil and gas leasing, the program also reviews and approves all proposed physical activity on the state leases.

Figure 28.
Coal Royalties



Royalty Auditing and Accounting

The program provides additional revenue to the school trusts through programmatic audits. The program serves an important role in identifying royalty under- and over-reporting, rectifying discrepancies, and raising the level of voluntary compliance.

Audit activity in FY 2001 underscored the improved level of compliance. Seven audits were closed out with no additional royalties due. Three audits are currently pending from FY 2001, with preliminary assessments of amounts due ranging from $2,400 to $58,000. However, final assessments are frequently adjusted as additional information is obtained from the lessees.

Abandoned Well Reclamation

The Board of Oil and Gas Conservation (BOGC) has regulatory and bonding authority on oil and gas wells in Montana, including those wells on state trust lands. BOGC seeks funding from the Reclamation and Development Grants Program, administered by DNRC's Conservation and Resource Development Division, to reclaim wells where there is inadequate bonding or no responsible party. The Minerals Management Bureau works with BOGC staff to integrate problem wells on state trust land into BOGC's grant requests.

Riverbed Leasing

The Minerals Management Bureau continues its efforts to clarify title to the beds and islands of navigable rivers. Pursuant to statute, the state owns those lands below the low-water mark, islands and their accretions formed in the riverbeds after statehood, and abandoned channels formed by avulsion. Because two navigable rivers in Montana flow through areas with major oil and gas resources, the department has conducted numerous riverbed studies to determine and document state ownership of land. This process allows the state to take a progressive position in issues involving substantial royalties.

In FY 2001, the state received $189,127 in oil and gas revenues from leased riverbed tracts. Other mineral leasing activity provided $908 from riverbed tracts.

This same ownership review process is also becoming increasingly important in areas where surface development and/or use encounters beds, islands, and abandoned channels of navigable rivers. The department continues to work with state, federal, and private entities whenever ownership issues arise.

McDonald Mine Proposal

In November 1994, the Seven-Up Pete Joint Venture (SUPJV) submitted a mine operation and reclamation plan to the Montana Department of Environmental Quality (DEQ) and DNRC for review. The proposed open-pit gold mine was to be located near the town of Lincoln in Lewis and Clark County and included both private and state school trust lands. Preparation of a joint environmental impact statement (EIS) then commenced, with DEQ, DNRC, and the U.S. Army Corps of Engineers serving as the co-lead agencies.

In July 1998, DEQ issued a stop-work order on the preparation of the EIS because SUPJV had not paid invoiced amounts due. SUPJV subsequently brought its EIS account current with DEQ, but did not fund any further EIS work. In September 1998, DNRC advised SUPJV that the remaining primary term of the mineral leases had resumed running because no EIS review work was taking place. DNRC further advised that, unless the EIS review process recommenced, the state mineral leases would expire when their remaining primary terms ran out in February 2000. In October 1998, SUPJV filed suit against DNRC, asserting that the leases would not expire. SUPJV subsequently withdrew that lawsuit.

In November 1998, a state initiative (I-137) passed that prohibits new open-pit mines that utilize cyanide heap leaching.

In July 1999, mine opponents filed suit against the State Land Board and DNRC, seeking a judicial determination that the mineral leases had already expired. In February 2000, DNRC notified SUPJV that the state school trust mineral leases had now reached the end of their primary term and expired. This determination was upheld on administrative appeal.

SUPJV amended its previously filed lawsuit against the State of Montana to include a challenge to this administrative determination. That lawsuit also alleges that I-137 constitutes a taking of property rights held by SUPJV. DNRC expects that litigation will continue in FY 2002.

Special Use Management

The Special Use Management Bureau administers all activities on lands classified as "other" and all secondary activities on lands classified as grazing, agriculture, or timber. The bureau's Real Estate Services Section is responsible for sales, exchanges, and grants associated with management of 5.1 million acres. The Right-of-Way Section manages the disposition of rights-of-way. The Property Management Section manages the Leasing Program and reciprocal access on classified forested lands. The Leasing Program includes commercial developments, new leases such as wind farms, and the existing homesite leases and short-term land use licenses. The bureau is also responsible for assisting other agencies with the management of their land. MCA 77-2-351 allows the state to transfer non-trust lands to local governments for a commitment that the property be used for a continuing public purpose.

Recreational use of trust lands by the public is permissible under the general recreational use license and is considered a special use. Organized or group use for recreational purposes is authorized under a special recreational use license.

The sources of FY 2001 special use revenue are summarized in Table 30, and each is shown as a percentage of the total special use revenue in Figure 29. Income from special uses over the last five years is illustrated in Figure 30.

Table 30
Special Use Revenues in Fiscal Year 2001

Cabinsite and homesite leasing (768 agreements)	$ 790,030
Easements	218,456
Special use leases and licenses	509,071
Recreational use	491,222
TOTAL	$2,008,779

Figure 29. Special Use Revenue by Source in FY 2001

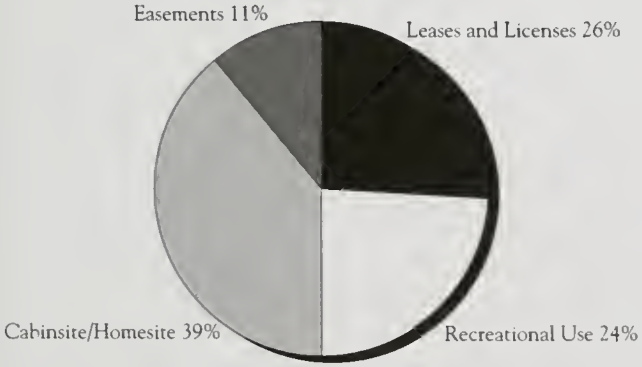
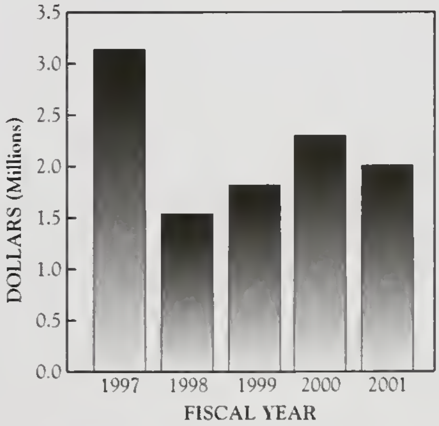


Figure 30. Special Use Revenues since FY 1997



Leasing/Licensing

Interest in special uses of state trust lands has greatly increased in recent years and is expected to continue into the future. The department issued 3 new leases and 112 new licenses in FY 2001. The Special Use Program is actively developing tracts of land with high potential for commercial leases in Great Falls, Bozeman, and Kalispell. Establishment of new leases and licenses for a multitude of special uses holds great promise for increased revenue to the trusts.

Lewis and Clark Subdivision—Bozeman

The bureau has received preliminary plat approval for the development of an eight-lot commercial subdivision located on 33 acres between the 7th and 17th Street Interchanges in Bozeman. Crop production on this parcel previously produced $1,000 annual income. It is anticipated that the leases of the eight commercial lots will produce over $100,000 annually. A lease agreement has been completed for the first tenant to locate a state office building on this site. The remaining lots are marketed under a contract with a local real estate firm.

Section 36—Kalispell

The bureau completed a neighborhood plan and an environmental impact statement to guide the development of a 600-acre parcel of land located immediately north of Kalispell. The environmental impacts of the proposed "high tech" industrial park were evaluated, and the department is proceeding with leasing activities.

In all cases, state trust land development is conducted in compliance with all local planning and zoning regulation.

Programmatic Plan

The bureau is in the process of developing a programmatic environmental impact statement to guide the department in the use of trust lands for commercial, industrial, recreational, open space, and wildlife habitat purposes.

Exchanges

The department reviews and processes land exchanges for the State Land Board under a land exchange policy that was developed a few years ago. Land exchanges are analyzed using the following base criteria.

- Equal or greater land value
- Similar navigable lake or stream values
- Equal or greater income to the school trust
- Equal or greater acreage
- Consolidation of state trust lands
- Potential for long-term appreciation
- Improved or equal access to state or public lands

In FY 2001, the bureau received five new applications and responded to over a dozen other informal inquiries. Three exchange proposals did not meet the exchange criteria and were denied. Three land exchanges were completed in FY 2001.

Crow Land Exchange

On November 2, 1994, the Crow Boundary Settlement Act was signed into federal law. The law included a provision that, as part of the settlement, the Crow Tribe was entitled to the approximate value of 46,625 acres of state land located within the Crow Reservation as a result of the Crow Allotment Act of 1920. The first priority for returning this value of land to the tribe was for the Secretary of the U.S. Department of the Interior to negotiate with the State of Montana for the exchange of those remaining state trust lands (approximately 34,000 acres) within the reservation for public domain lands outside the reservation and administered by the U.S. Bureau of Land Management (BLM).

The land exchange was divided into three phases that involved exchange of school trust lands. The first two phases of the exchange were completed in 1999. Appraisals and environmental studies for the approximately 20,860 acres of state land remaining on the reservation for the third phase exchange were completed in August 2000, and public hearings were held in September 2000. The phase three exchange was presented for the approval of the State Land Board in November 2001. Approximately 21,561.3 acres of BLM land in northeastern, central, and southeastern Montana were acquired by the state in the third exchange.

Land Sales

No land sales were conducted during FY 2001. Four lots in the Continental Divide Subdivision in the Billings area continue to be advertised and marketed for sale through a contract with a local realtor.

Land Transfers

The 1995 Legislature passed MCA 77-2-351, which allows the state to transfer non-trust state land to a local government entity in return for a commitment that the property be used for a continuing public purpose. In FY 2001, the bureau transferred the old Plentywood Armory and 5 acres of land to the Town of Plentywood for local government purposes. Additionally, a 21.12-acre parcel was transferred to Jefferson County for continued use as a solid waste transfer station.

Recreational Use

The Recreational Use Program, established by House Bill 778 during the 1991 legislative session, is in its tenth year of development. Legally accessible state trust lands may be used for recreational activities by persons who hold state land recreational use licenses, provided the lands are not closed or restricted for such use by rule or by the department. The type of license required depends on the type of activity conducted. Licenses for "general" recreational use—which, with a few exceptions, includes most forms of noncommercial and nonconcentrated recreational activities—can be purchased from all Montana Department of Fish, Wildlife and Parks license agents and DNRC area offices. "Special" recreational use licenses, which are available only from DNRC area offices, are required for concentrated recreational use conducted by groups or organizations, or for commercial activities such as outfitting. In FY 2001, 37,818 general recreational use licenses and 173 special recreational use licenses were sold.

Rights-of-Way

The bureau is responsible for reviewing and processing applications for rights-of-way and easements across surface lands and navigable waterways administered by the state. Rights-of-way are most commonly sought for utility lines, pipelines, and roads. Applications for private driveways have been increasing steadily over the past few years. This increase has led DNRC and the State Land Board to develop a policy establishing criteria for review of these requests. The critical components of this private driveway policy evaluate the impact on the value of state trust land and the ability of state trust land to produce revenue.

In FY 2001, approximately 115 new applications and 29 assignment requests were processed. Ninety-eight applications were presented to the State Land Board, and five applications are pending. Five emergency construction licenses were issued during the year. Revenue for rights-of-way in FY 2001 totaled $218,456.

Reciprocal Access

The department is actively pursuing acquisition of access to isolated school trust lands to facilitate management and provide increased revenue to the trusts. Eighteen reciprocal access agreements were reached in FY 2001, resulting in permanent easements to 42,854 acres of state trust land. The department granted easements for 50.96 miles of roads on state trust land and acquired 83.61 miles of roads under easements on private and national forest sysrem roads.

WATER RESOURCES DIVISION

PHOTO BY DAVE AMMAN

WATER RESOURCES DIVISION

Providing the most benefit, through the best use, of the state's water resources for the people of Montana.

The Montana Constitution affirms that the state's water resources are owned by the State of Montana and are to be used by its people. DNRC has the statutory responsibility to ensure that the state's water resources are managed to meet the existing and future needs of its citizens.

The Water Resources Division (WRD) is comprised of four bureaus — the State Water Projects, Water Management, Water Operations, and Water Rights Bureaus — and eight regional offices. The division employs approximately 115 persons with staff members stationed in Helena's central office and in the regional offices, which are located in Billings, Bozeman, Glasgow, Havre, Helena, Kalispell, Lewistown, and Missoula.

Further information about the division and Montana water resources can be found on the division's website at:

www.dnrc.state.mt.us/wrd/home.htm

State Water Projects

The State Water Projects Bureau administers the operation, management, and rehabilitation of the state-owned dams, canals, and hydropower projects listed in Table 31, which are owned by DNRC, and Table 32, which are owned by DFWP. Local water user associations that market the water for irrigation and other purposes operate most of the projects. Debt repayment is derived from repayment contracts with water users and from leases of lands associated with the projects (see Table 33). The bureau ensures that the projects are operated and maintained in a safe, efficient manner and that repayment contracts are properly administered.

Table 31
Dams Managed by the State Water Projects Bureau
and Owned by DNRC

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard[1]	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Ackley	1938	5,975	Yes	Yes	Yes	Judith Basin
Bair	1939	7,029	Yes	Yes	Yes	Meagher
Broadwater-Missouri (Toston)	1940	3,000	Yes	No	Yes	Broadwater
Cataract	1959	1,478	Yes	Yes	Yes	Madison
Cooney	1937	28,140	Yes	Yes	Yes	Carbon
Cottonwood	1953	1,900	Yes	Yes	Yes	Park
Deadman's Basin Dam and Dike	1941	76,900	Yes	Yes	Yes	Wheatland

[1] A *high hazard* dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

(Continued on page 100)

Table 31
Dams Managed by the State Water Projects Bureau and Owned by DNRC

(Continued from page 99)

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard[1]	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
East Fork of Rock Creek (Flint Creek)	1938	16,040	Yes	No	Yes	Granite
Fred Burr	1948	516	No	No	Yes	Ravalli
Frenchman	1952	3,752	No	No	Yes	Phillips
Glacier (two dams)	1937	4,200	Yes	No	Yes	Carbon
Martinsdale (two dams)	1939	23,080	Yes	Yes	Yes	Wheatland
Middle Creek (Hyalite)	1951	10,184	Yes	Yes	Yes	Gallatin
Nevada Creek	1938	12,640	Yes	Yes	Yes	Powell
Nilan (two dams)	1951	10,092	Yes	Yes	Yes	Lewis and Clark
North Fork Smith River	1936	11,500	Yes	Yes	Yes	Meagher
Painted Rocks	1940	32,362	Yes	Yes	Yes	Ravalli
Ruby	1939	38,850	Yes	Yes	Yes	Madison
Tongue	1939	79,071	Yes	Yes	Yes	Big Horn
Willow Creek	1938	18,000	Yes	Yes	Yes	Madison
Yellowwater Dam and Dike	1938	3,840	Yes	Yes	Yes	Petroleum

1. A *high hazard* dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

Table 32
Dams Managed by the State Water Projects Bureau and Owned by DFWP

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard[1]	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Ashley Lake	Unknown	20,400	No	No	Yes	Flathead
Bearpaw	1958	535	Yes	Yes	Yes	Hill
Clearwater Fish Barrier (Lake Inez)	1963	>50	No	No	No	Missoula
Gartside	1962	326	Yes	Yes	Yes	Richland
Johnson	1930s	208	No	No	Yes	Hill
Knowlton	1890	166	No	No	Yes	Teton
Park Lake	1872	225	Yes	Yes	Yes	Jefferson
Rainy Lake Fish Barrier	Unknown	>50	No	No	No	Missoula
South Sandstone	1975	940	No	No	Yes	Fallon
Whitetail	1930s	198	No	No	Yes	Daniels

1. A *high hazard* dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

Table 33
Leases Associated with DNRC-Owned Water Projects

Lease Type	Number of Leases	Annual Revenues
Cabinsite	26	$4,353
Grazing	5	4,630
Right-of-Way	1	42
TOTAL	32	$9,025

Project Rehabilitation

The Project Rehabilitation Program identifies and corrects safety and operational deficiencies on state-owned projects. Projects rehabilitated or partially rehabilitated during FY 2001 include the Tongue River Dam, located in southeastern Montana, and Martinsdale North Dam, located near Martinsdale, Montana.

Tongue River Dam

The Tongue River Project resulted in the rehabilitation, repair, and enlargement of the Tongue River Dam; partial fulfillment of the Northern Cheyenne Indian Reserved Water Rights Settlement Act; and the conservation, development, and enhancement of fish and wildlife resources and habitat in the Tongue River basin. The project is a partnership involving the State of Montana, USBR, and the Northern Cheyenne Tribe. The dam project was completed on July 31, 1999. Management of the dam was turned over to the Tongue River Water Users Association on August 1, 1999. Warranty work on various project components began in the fall of 2000.

On May 28, 2000, the lifting mechanism for the fixed wheel gate in the primary outlet failed during routine operations. The gate stems and connectors, steel supporting plate and beams, beam mounting pads, and hydraulic system were damaged as a result of this failure. Negotiations with the various contractors and the main project consultant are ongoing concerning the design and cost-sharing of the gate system repair. The gate repairs began in February 2001 and are ongoing. The gate repair work is scheduled for completion by the fall of 2001.

The total cost of the Tongue River Project was $46.3 million. This amount was cost-shared between the Tongue River Water Users Association, the State of Montana, and the federal government. The State Water Projects Bureau contributed engineering design review and project oversight for the Tongue River Project in FY 2001.

Martinsdale North Dam

The Martinsdale North Dam and Reservoir are located in Wheatland County approximately 1 mile southeast of Martinsdale, Montana. The dam is owned by DNRC and operated and maintained by the Upper Musselshell Water Users Association.

In the fall of 2000, sediments accumulated around the inlet, blocking the structure and creating a potentially serious safety concern. During the winter of 2000/2001, a jet-pump was used to remove the sediments from the 60-inch concrete pipe. Two temporary hay bale check dams were constructed downstream from the dam to prevent any water and sediment from flowing into the Musselshell River, located 2.5 miles downstream from the dam. The inlet was successfully cleared with no impact to downstream water quality. Bureau staff were on-site throughout the duration of the project to supervise and monitor the work, which was performed by a private contractor. The cost of the cleaning operation, which totaled approximately $30,000, was paid for by the Upper Musselshell Water Users Association.

A request was also made by the Upper Musselshell Water Users Association to draw the reservoir down below the established minimum pool of 1,100 acre-feet to provide additional irrigation water during the prolonged drought. An EA was completed and, after consultation with DEQ and DFWP, the action was approved. The inlet will also be raised approximately 5 feet to help prevent future sedimentation problems.

Bair Dam and Nevada Creek Dam Rehabilitation Projects

DNRC contracted feasibility studies of both of these rehabilitation projects. Site investigations and geotechnical drilling have been completed. Data collected from piezometers installed in drill holes have been used for seepage analyses of the dams. The cultural resources Class I inventory and report have been completed. The grant and loan applications submitted to DNRC's Conservation and Resource Development Division in May 2000 were approved, with both projects fully funded by the 2001 Legislature. A single design contractor was selected for both rehabilitation projects. The rehabilitation proposed for both Bair and Nevada Creek Dams involves the construction of new spillways, seepage drains, and outlet structures. Construction will be accomplished using a phased approach. Phase I construction will occur during the fall of 2001, with Phase II scheduled for the summer and fall of 2002.

Deadman's Basin Project - Barber Canal

A Renewable Resource Loan in the amount of $437,000 and a grant of $75,000 were approved by the 1999 Legislature to fund the third and final phase of the Barber Canal Rehabilitation Project, which was substantially completed in April 2001. The work, increasing Barber Canal's flow from 200 to 300 cubic feet per second, included the modification of the approach canal, the reshaping of the Barber Canal, the reconstruction of county road crossings, the replacement of an 80-foot drop structure, and the installation of a new highway crossing. One Montana company designed the project, and another performed the construction work.

Broadwater-Missouri Pipe Span Project

The 1999 Legislature approved a Renewable Resource Loan in the amount of $509,000 to provide the Broadwater-Missouri Water Users Association with funding to rehabilitate the irrigation pipe that spans the Missouri River near Toston. The 7-foot-diameter, 666-foot-long pipe supplies irrigation water for 23,635 acres of wheat, barley, potatoes, and hay. During the winter of 2000, the eroded coal-tar lining from the interior of the pipe was replaced with a new zinc/aluminum, thermal-sprayed coating. The pipe span's expansion joint was rehabilitated in the spring. In April and May 2001, corrosion and blistered paint were removed from the exterior of the pipe, and the pipe was repainted with a new, aluminized overcoat. A deteriorated wood walkway atop the pipe was replaced with a steel-grating walkway, and the buried portion of the pipe was safeguarded against further corrosion with a galvanic cathodic protection system.

Seepage Monitoring

Seepage monitoring programs are required as a condition of the operating permits for all of the regulated high hazard dams in Montana. A *high hazard* dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam. Of DNRC's 21 projects, 19 are classified as high hazard (see Table 31).

The bureau's seepage monitoring program was enhanced with the introduction of the "DamSmart" computer program, which allows monitoring well data to be graphed and compared with reservoir levels, weir and flume flows, and water conditions around the dam. These data are used in conjunction with annual inspections and monthly reviews.

Project Management

The Project Management Program administers the operation of the state-owned dams and oversees the repayment contracts with the water user associations. Additionally, the program protects water rights for the projects and oversees disposal of projects no longer appropriate for state ownership.

Project Disposition

Many years ago, the State of Montana became involved in various water conservation projects because there was a need for government to create employment opportunities and stabilize the agricultural economy. Governmental involvement in these projects no longer provides public benefits, and the projects are being transferred to water districts and private ownership. The following activities were accomplished during FY 2001.

- The Burgess Storage and Winnett Water Well Projects were transferred to the current landowners. No money was involved in the transfer.
- Preliminary file reviews, financial status determimations, title searches, and field reviews were performed on the Noxon municipal water supply, Flint Creek Canal Project, Teton Cooperative, and Valentine Reservoir. Negotiations to transfer the Noxon and Flint Creek Projects are in progress.

Water Measurement and Water Rights Activities

The State Water Projects Bureau is responsible for all activities necessary to protect and maintain the water rights for all state-owned water projects.

In FY 2001, the bureau collected and recorded bimonthly reservoir storage data for 18 state-owned reservoir projects, and it operated and maintained 31 permanent stream- and canal-gaging stations associated with state projects.

Additionally, the bureau measured streamflows and maintained rating tables for staff gages on the four major tributaries immediately above Painted Rocks Reservoir. These gages are used to provide inflow data for use in implementing the *Operating Plan for Painted Rocks Reservoir*, which was first developed and implemented in FY 1999. This data collection included tabulating and recording annual discharge summaries for all stations for FY 2001.

In 1996, the State Water Projects Bureau requested the Montana Water Court to clarify its project water rights by consolidating its claims, which were originally filed for five uses (storage, irrigation, stock, domestic, and municipal), into claims for "Sale of Water" for those same purposes. The proposed clarification of purposes would allow the place of use for the water to be described in more general terms, that is, by township, range, and county only. The proposed consolidation and clarification of DNRC claims would not change the historical purpose of water use from the state projects, but only more accurately and concisely reflect that historical use. A decision on these issues was filed by the Water Court on May 12, 2000, under an Order Adopting Master's Report in Case No. 76HE-166. This decision granted all of the DNRC requests and amended the DNRC water rights for the Painted Rocks Project accordingly.

In FY 2001, the State Water Projects Bureau amended its project water rights in basins 41C, 41K, 43A, 43D, and 76HF to incorporate the results of the decision. The final resolution of objections and Water Court decisions are pending on these basins. The bureau also continued settlement of unresolved objections and litigation involving state-owned water projects in various other basins still in the temporary preliminary stage of the water rights adjudication.

The bureau is responsible for all water measurement and water right activities associated with state-owned water projects. These activities include the monthly collecting, reporting, and summarizing of reservoir storage data for 18 state-owned reservoir projects, and operating and maintaining 35 stream-gaging stations. This data collection includes tabulating and recording annual discharge summaries for the 35 gaging stations. Research and technical support and assistance are provided to legal staff for resolving all water right issues on the projects. Most water right work involves settlement of objections to project water rights currently before the Montana Water Court in the ongoing statewide adjudication proceedings. Operating plans for water delivery are developed, and water use or other related land use problems on the projects are solved.

Administration of Project Lands and Leases

DNRC owns land surrounding state-owned reservoirs, supply canals, and water delivery canals. DNRC also assists DFWP in the operation and maintenance of 10 dams owned by DFWP. These lands are unique and are administered under a special set of statutes.

DFWP again requested funding to repair a slump at DFWP's Bearpaw Dam in Hill County. The slump occurred in the summer of 1998 and is located immediately to the west of the spillway. It could threaten the integrity of the spillway if left unrepaired. The proposed repair would remove 3,500 cubic yards of material from the slope, establish a new 2:1 slope, and place the material at two fill locations a short distance from the dam. Feasibility studies and rehabilitation projects were also initiated at Knowlton and Park Lake dams in FY 2001.

Noxious weed control is an ongoing problem at almost all of the department's projects. The six-year Noxious Weed Plans, which were developed in FY 1997, are still in effect and were being implemented in FY 2001. All weed control costs are borne by the water user associations.

Hydropower

The Hydropower Program administers the development and operation of hydropower facilities on state-owned water projects. To date, one hydropower facility, the Broadwater Power Project near Toston, has been built. With a maximum capacity of 10 megawatts, the project began generating power in June 1989.

DNRC owns and operates the facility and contracts with Montana Power Company (MPC) to sell the energy. Earned revenues are used to pay for rehabilitating other state-owned water projects. In an average year, the facility is capable of generating roughly 56 million kilowatt-hours of electricity. Earned revenue is calculated by applying the rates established in the Power Purchase Agreement; these rates escalate annually.

Generally, Missouri River flows at the Toston Dam from July 2000 through June 2001 were below average. Annual maintenance was performed in August 2000, requiring about 250 hours of downtime. Since river flow was critically low, the maintenance staff performed additional work not typical of an annual maintenance period. For the remainder of the year, downtime was minimal. Statistics concerning the Broadwater Power Project during FY 2001 are shown in Table 34.

Table 34

Broadwater-Missouri Power Project in FY 2001[1]

Operating availability	97 percent
Gross energy generation	43,303,915 kilowatt-hours
Gross revenue from sales	$ 2,697,651
Investment income	$210,617
Operating costs	($370,064)
Bond payments	($2,177,078)
NET REVENUE	$361,126

1. Note: Because some fiscal year-end numbers were unavailable, the table's numbers include some estimates.

Improvements to the PLC-based automated control system are ongoing in a continued commitment to better manage reservoir and tailwater levels. A Request for Proposals for a replacement trash-raking machine was prepared, and a contract was awarded. The machine should reduce head loss due to impacts from river debris and thereby increase efficiency and revenue.

Water Management

The Water Management Bureau (WMB) provides educational, technical, and other types of support in (1) solving statewide water resource issues and policy concerns, (2) protecting Montana's interests in regional and international river basins, and (3) assisting local watershed and user groups solve water management issues and problems. WMB also provides technical support to other DNRC bureaus, the Reserved Water Rights Compact Commission, and water user groups.

Watershed Management

In FY 2001, WMB staff worked in 16 watersheds. Examples of WMB activities are described below.

Big Hole River

WMB staff provided technical support to the Big Hole Watershed Committee. Staff gathered hydrologic information for the third consecutive year to understand the effect that irrigation has on river flows throughout the year. The study is being completed in cooperation with USBR and the Montana Bureau of Mines and Geology (MBMG). Two other investigations were completed. One identified the amount of water that could be stored in the proposed Twin Lakes storage site, and the other determined that the stored water could be released into Big Lake Creek to benefit flows in the Big Hole River during times of drought.

Bitterroot River

WMB gave a grant to the Bitterroot Water Forum to work on drought management and continued to provide staff support and technical assistance. Staff also helped the forum, DEQ, and other partners scope and design a TMDL planning effort for the Bitterroot headwaters. Staff also assisted the forum and other partners, including USFS, to develop the Bitterroot Watershed Partnership, a large-scale watershed planning effort.

Blackfoot River

WMB staff helped the Blackfoot Challenge and local irrigators to develop and implement a drought mitigation plan for the Blackfoot and Clearwater rivers in the dry summers of 2000 and 2001. A number of stream gages were established and monitored throughout the year. Working with the Blackfoot Challenge, DFWP, and FWS, staff began analyzing ways to improve flows in Poorman Creek.

Clark Fork River

WMB provided staff support to the Upper Clark Fork Steering Committee. In addition to providing general technical support, staff continued working on dewatering, drought mitigation actions, effects of Avista's water rights on upstream junior water users, and TMDL issues. Staff conducted technical work on the operations of Georgetown Lake, began evaluating the effects of the proposed Continental Energy project on existing water supplies, and began evaluating seepage losses from ditches located off the main stem of the Clark Fork upstream of Deer Lodge. Staff continued to provide secretarial support to the Upper Clark Fork Steering Committee by recording and preparing minutes of monthly meetings.

Flathead River

WMB staff served on the Flathead Basin Commission, helped the commission coordinate international activities with British Columbia, and assisted the TMDL technical committee. Staff is also providing technical assistance in the development and implementation of a wetland/riparian assessment and restoration plan for the Ashley Creek watershed.

Milk River

WMB and the Glasgow Regional Office are working with USBR, local irrigation districts, and other users to solve water management and distribution issues within the Milk River basin. A three-year grant has been received from USBR to help the eight irrigation districts (organized into three divisions) better understand how water is managed within the drainage, to learn about more efficient water conservation practices, and to assist the local irrigation districts in developing water conservation plans. Two conservation plans were completed in 2000.

Four quarterly *Milk River Watershed* newsletters were published and mailed to more than 1,200 water users in the Milk River basin. WMB and the Glasgow Regional Office obtained the articles, and WMB staff edited, published, and mailed the newsletter.

WMB continued to work with the Reserved Water Rights Compact Commission to create a Geographic Information System (GIS) water right and water use database for the Milk River. DNRC is helping the irrigation districts use the software and database to improve basin-wide water management. WMB assisted the Reserved Water Rights Compact Commission with the development of a negotiated compact on the reserved water rights of the Fort Belknap Tribes.

The Milk River International Alliance is a grass roots organization of water users from Montana, Alberta, and Saskatchewan and local, state, and federal governmental officials. Formed in March 1999, it has a goal of providing education, technical assistance, and coordination in improving the management of water supplies within the Milk River basin. WMB continued to provide administrative, facilitative, and technical support to the group. In addition, staff wrote two grant applications, and funds to assist the Milk River International Alliance were awarded.

Missouri River

WMB staff facilitated the meetings of the Missouri River Corridor Conservation District Council. This included scoping issues concerning the Missouri River, developing ground rules and organizational structure, and creating a work plan.

Nevada Creek

WMB staff continued to measure sediment, inflows, and releases from Nevada Creek Reservoir. Samples are being taken daily (or more frequently) above and below the reservoir from May through October and are being analyzed to determine the effects of the reservoir on sediment loads in Nevada Creek.

North Fork of the Blackfoot River

The North Fork of the Blackfoot study was completed and presented to the water users and the Blackfoot Challenge. The study identified ways to improve water use in the basin. A corollary study that was initiated in the spring of 2000 is being completed by a MBMG graduate student. The study is investigating the relationship between groundwater and the North Fork of the Blackfoot River. WMB is funding and overseeing this investigation.

Rock Creek, Tributary of the Clarks Fork Yellowstone

Staff continued to collect streamflow data from five stream-gaging stations on Rock Creek. WMB will analyze these data to help water users better manage water supplies in Rock Creek and releases from Cooney Dam.

Ruby River

WMB continued to help the Ruby River water users implement and refine a dewatering prevention plan for the Ruby River. WMB oversees the operation and maintenance of four streamflow gages for the water users.

Shields River

WMB is completing a three-year study of the Shields River for the Shields River Watershed Group. The study is assessing ways to improve water-use efficiency in the basin and examining the potential for storage. Funding was obtained from USBR to purchase and install the measuring devices.

Smith River

Meagher County Conservation District, local irrigators, and NRCS asked WMB to determine the effects of irrigation in the upper reaches of the Smith River on downstream river flows and the effects of converting flood irrigation to sprinkler irrigation. WMB designed and implemented the study in 2000 and continues to collect surface water and groundwater information. Staff obtained approval from Meagher County CD and local water users before proceeding with the investigation.

Sun River

WMB continued to collect streamflow data from Elk Creek and other tributaries of the Sun River for the Sun River Watershed Group. The group requested assistance in conducting a hydrologic water balance analysis of the Sun River basin.

Tenmile Creek

WMB continued to provide staff support and facilitation to the Upper Tenmile Watershed Steering Group. The group continues to work on issues related to streamflows, riparian habitat, water quality, and Superfund cleanup. In 2001, WMB wrote two grant applications to coordinate and complete the fourth riparian restoration project, in which more than 15,000 trees and shrubs were planted in the riparian corridor, with labor provided by the Montana Conservation Corps.

Yellowstone River

WMB continued to provide support to the Governor's Upper Yellowstone River Task Force. Activities included serving on the task force's technical advisory committee, providing liaison with state and federal agencies, writing and monitoring grants, and responding to information requests from the task force.

A $300,000 Resource Development Grant and other funds are being used to develop components of a cumulative effects investigation of the upper 80-mile reach of the Yellowstone River. The investigations are examining the effects of bank stabilization on aquatic and riparian vegetation and fish and wildlife habitat. WMB continues to coordinate the cumulative impact assessment on channel geomorphology with assistance from the Montana Office of the Water Resource Division of the U.S. Geological Survey (USGS), the Biological Resource Division of USGS (Fort Collins), the University of Montana School of Forestry, and FWS. The work is being conducted cooperatively with the U.S. Army Corps of Engineers and other state and federal agencies with regulatory authority. A technical advisory committee of the task force oversees the work.

WMB is also assisting both the Yellowstone River Council (a group of 12 conservation districts) and the Yellowstone River Conservation Forum (a group of 23 conservation groups) with issues on the middle and lower Yellowstone River. Staff facilitated a conference, called the Yellowstone Roundtable.

WMB continued the 10-year review of the Yellowstone River basin water reservation objectives, as required by statute.

Protection of Montana's Water

DNRC has statutory responsibility to protect Montana's water resources in interstate and international water allocation and management proceedings and decisions. DNRC activities during FY 2001 are described below.

Columbia River

WMB continued to provide technical information and advice on issues associated with the operation of the Columbia River basin and the effects of federal decisions within Montana.

Lower Missouri River

WMB represented Montana on the Missouri River Basin Association's technical committee that reviews and recommends options for annual operation of the Missouri River main stem system, as well as alternatives for revising the *Missouri River Master Manual*. Staff analyzed impacts of operation plans on Fort Peck Reservoir and the lower Missouri River. Staff helped lower basin water users to assess pump sites that could be impacted by high spring releases from Fort Peck Reservoir.

Milk River

WMB staff met twice with Alberta Environment, Environment Canada, USGS, and USBR on the letter of intent to better utilize surplus waters of the St. Mary and Milk rivers. The letter of intent was finalized and approved by the credited officers and the International Joint Commission, and provides additional benefits to Montana. Other issues that are being considered include water quality and ways to improve the accuracy of the international apportionment.

North Fork of the Flathead River

WMB continued to coordinate communications between British Columbia and the Flathead Basin Commission about creating a Memorandum of Understanding (MOU) between the state and the province. The MOU is intended to set up a forum to resolve conflicts and cooperate on the management of resources within the North Fork of the Flathead River basin of Montana and British Columbia.

Poplar River

WMB continued to coordinate with Saskatchewan Water Corporation regarding the annual release of water from Cookson Reservoir into the East Fork of the Poplar River, in accordance with the International Joint Commission's recommended apportionment. Staff worked with USGS to ensure that Montana receives its rightful share.

Protection and Use of Montana's Groundwater

Examples of WMB's groundwater protection and use activities that occurred in FY 2001 are described below.

WMB continued to define the parameters and controls for establishing the Coal Bed Methane Controlled Groundwater Area in the Powder River basin of southeastern Montana. A technical advisory committee chaired by a WMB staff member oversees monitoring and the collection of baseline data as part of the controlled groundwater area. The staff also works with a group of federal and state agencies that are preparing a programmatic EIS on the potential effects of coal bed methane gas development on water quality, existing water rights, and aquifers in the basin.

WMB continued to assist in implementing the Medicine Lake Groundwater Study in Sheridan County and to assist Sheridan County Conservation District in managing its groundwater reservation.

WMB continued to work with the water resources regional offices in reviewing and analyzing numerous and more complex groundwater right applications and water right complaints, and to assist with the monitoring of groundwater within the Yellowstone National Park Controlled Groundwater Area. A WMB staff person continued to chair the Yellowstone National Park Technical Oversight Committee and is a member of the Groundwater Assessment Steering Committee.

Water Resource Education

WMB provides water resource education to water users and other water interests across the state. The goal is to provide citizens with the tools and knowledge to solve their own watershed and water resource problems. Specific activities in FY 2001 include the following.

WMB staff at the Montana Watercourse supervised the multiple activities of three full-time water education specialists at Montana State University: the Project WET Montana Coordinator, the Montana Volunteer Water Monitoring Coordinator, and the Montana Wetlands Education Coordinator. In addition, WMB staff at the Montana Watercourse completed the following activities.

- Watershed Tours. Montana Watercourse conducted watershed tours in the Blackfoot and Clark Fork river basins. The watercourse collaborated with water users, groups, and others within these basins in designing the tour agendas. Participating teachers receive university credit for this field experience.

- Rocky Mountain Watershed Roundtable (May 2001). Montana Watercourse staff sponsored and facilitated a retreat for watershed coordinators in the Rocky Mountain states of Colorado, Wyoming, Utah, Montana, and Idaho. More than 80 people attended, including 11 state and federal water managers. The purpose of the gathering was to create an opportunity for those involved in watershed coordination to share their experiences and learn from one another. Participants recommended that it become an annual or biannual event.

- Montana Watershed Coordination Council (ongoing). Staff of the Montana Watercourse continued to chair the coordination council. In this capacity, staff provided coordination, communication, and leadership that includes long-range planning, development of biannual plans of work, correspondence, and biannual reports. Staff also participated in three work groups: the Agenda Committee, Watershed Recognition Work Group, and Water Activities Work Group. Products generated by involvement in these groups include quarterly meeting agendas for the council, revised work plans for the council, selection of the winners of the Montana Watershed Stewardship Award 2001, and the 319 Grant review process.

Improvement of Statewide Water Management

WMB helps governments and local water users improve local water management. A number of those activities in FY 2001 are described below.

WMB staff was involved in discussions and negotiations with Avista (formerly Washington Water Power) on the relicensing by the Federal Energy Regulatory Commission (FERC) of its hydropower facility at Noxon Rapids and Cabinet Gorge. WMB is a member of Avista's Water Resources and Fisheries Working Groups and Management Committee. WMB drafted legislation that was passed by the legislature to begin a process to resolve the issues associated with Avista's ability to make a "call" on junior water right holders to stop using water in the basin above its hydropower facility at Noxon and to provide for the orderly development of water into the future.

WMB, in cooperation with other state and federal agencies, is preparing "Water Resource Reference Documents in the Year 2000." The documents describe the changes in water use, water supply, and water quality throughout the last century and during the year 2000. These documents should benefit water managers, water professionals, and teachers in the 21st century.

WMB staff actively participated on the Montana Watershed Coordination Council. The goal of the council is to provide better coordination, technical assistance, funding, and educational information to local watershed groups throughout Montana so that they can do a better job of resolving water resource problems. WMB staff served on a number of committees and work groups to support the council's efforts.

WMB supported and coordinated activities of the Governor's Drought Committee. Last year, the drought committee held meetings almost monthly. The *2001 Drought Status Report* was prepared and submitted to the governor in April. WMB supports and works closely with the lt. governor, who is the chair of the Governor's Drought Committee. The committee is responsible for implementing the *Montana Drought Response Plan*. The *2001 Drought Status Report* describes the potential for drought and different response actions, if appropriate, at the state and local level. Staff spent considerable time helping local water users and groups to mitigate drought impacts. Staff also participated in drafting the National Drought Preparedness Act of 2001.

WMB prepared and distributed monthly water supply and moisture condition reports to local, state, and federal governments; statewide news media; and other interested parties. In addition, the severe drought conditions that prevailed over the state in the winter, spring, and early summer of 2001 caused the staff to continually provide information about drought conditions and ways to mitigate drought impacts.

WMB continued to work on integration of water quality and quantity by reviewing nonpoint pollution discharge permits, commenting on EPA's draft 319 Rules, participating in DEQ's assessment of priority streams for listing as water-quality-impaired, and participating on the Water Pollution Control Advisory Board and on the Water Activities Committee, which advise DEQ on its Nonpoint Discharge Elimination System Program.

Development of Drinking Water Supplies

WMB administered the appropriations for the North Central Montana Rural Water Supply System and the Dry Prairie Rural Water Supply projects.

Other Water Management Activities

WMB continued to assess the effects of deregulation on the operation of the Toston hydropower facility and offers for the purchase of the Power Purchase Agreement with Montana Power Company. Staff reviewed the feasibility of hydropower development at state-owned storage projects.

WMB also provided weather forecasting and snowpack information to the State Water Projects Bureau.

WMB finished working on two major environmental assessments. One was for a 1,000-acre irrigation project using water from the Marias River, and the other assessed likely impacts from the creation of a wetland by diverting water from the Bitterroot River.

WMB provided technical assistance in logging bore holes for dam stability studies of numerous state-owned dams.

WMB staff continued to lay out and publish the Water Resources Division's newsletter, the *Milk River Watershed News*, flyers, and other documents of the division, as well as design and update the web page for the Water Resources Division.

WMB provided technical assistance and advice to the Reserved Water Rights Compact Commission in its negotiations with the Native American Tribes on the Fort Belknap Reservation and with USFS.

WMB continued to assist the Water Operations Bureau with dam safety issues, such as the design of spillway standards for a number of storage projects, and with surveying.

WMB operated a gaging station on the T & Y Canal to help local water users manage water supplies.

Water Operations

The Water Operations Bureau administers the Dam Safety, Floodplain, and Water Measurement Programs and provides staff support for the Board of Water Well Contractors.

Dam Safety Program

The primary purpose of the Dam Safety Program is to ensure that dams that have the potential to cause loss of life downstream, if they fail, are properly constructed, maintained, and operated. An operation permit is issued for high hazard dams that have been found to be safe. Currently, 87 dams in the state are permitted, high hazard dams. Four additional high hazard dams are expected to be permitted. The Dam Safety Program regulates an additional 2,770 low and significant hazard dams. These dams to not require a permit.

Permitting of High Hazard Dams

To obtain or renew an operation permit, the high hazard dam owner must review and update the dam's emergency action, operation, and maintenance procedures and have an inspection conducted by a professional engineer. Often, conditions placed on an operation permit require that certain dam deficiencies be addressed. Failure to meet the conditions of an operation permit can result in a restriction on the reservoir level and/or a fine. The Dam Safety Program issued 26 operation permits in FY 2000 and FY 2001.

Any construction on a dam that could potentially be a threat to the dam's integrity requires a construction permit. The permit must be accompanied by design plans and specifications that are put together by a professional engineer. The Dam Safety Program issued construction permits in FY 2001 for these dams:

- Tin Cup Dam (Powell County)
- Crazy Mountain Dam (Park County)
- Carbon Dam (Carbon County)
- Doggett Dam (Meagher County)

When a new dam is constructed or an existing dam repaired, the owner is required to apply for a hazard classification. A hazard classification is a determination of the potential for loss of life to occur downstream due to dam failure. In FY 2001, 11 hazard analyses were completed.

Public Awareness/Education

During this fiscal year, the Dam Safety Program sponsored two seminars. The first, a three-day course on advanced slope stability analysis that was held in Helena, had 35 attendees. The second seminar, a two-day course on outlets and gates that was held in Billings, had approximately 85 attendees. Both of these seminars were intended for engineers who specialize in dams. Next year's course will be tailored to dam owners.

Emergency Action Plan Update and Testing

State law requires that emergency action plans (EAPs) be updated on an annual basis for all high hazard dams regulated by DNRC. In addition, tests of the plans are supposed to be completed frequently. To accomplish these goals, an emergency action plan coordinator was hired to help the Dam Safety Program to ensure that EAPs are up-to-date and regularly tested. This position is funded using only federal grant monies.

For FY 2001, 36 plans were reviewed, 4 tabletop exercises were conducted, and 16 dam owners were provided assistance with updates. Plans are underway to test two additional dam emergency action plans in the next two months.

Several benefits result from testing the plans. County sheriffs and other non-technical emergency service people learn about the intricacies of dams. Testing the plan forces the dam owner to evaluate the adequacy of emergency repair materials, examine access routes to the dam, and think about potential downstream hazards. The public benefits by having increased owner awareness and well-developed emergency planning.

Emergency Action Plan Evacuation Maps

Most of the inundation maps contained in EAPs for high hazard dams are copies of USGS quadrangle maps. Some of these maps are hard to read. In an effort to improve the quality of the maps, the Dam Safety Program is in the process of taking aerial photos. Aerial photos provide much better detail. They are also easier for county disaster and emergency services personnel to use because they can recognize landmarks on an aerial photo more readily than on a topographic map.

The objective of the program is to revise EAP maps, using aerial photography as an aid to illustrate and identify downstream hazards. Seven inundation areas were flown in FY 2001. Plans are in place to complete three additional areas before the end of the summer, depending on the availability of pilots and the severity of the fire season. The goal is to eventually have all of the inundation maps for the state's high hazard dams that DNRC regulates in more usable digital format. This program is in its second year and will be continued through the summers of 2001 and 2002.

Summer Engineering Project Aides

During the summer, the water resources regional offices located throughout the state are responsible for maintenance inspections, measurement of monitoring devices, and downstream hazard evaluation. Six students were hired from May through August to assist the regional engineers. All salaries and operating expenses were funded with federal grants. The students worked closely with the regional engineers, primarily conducting downstream hazard assessments of high hazard dams. The students are also evaluating drain flows and piezometric data on several state-owned dams, and are helping with a bathymetric survey of a reservoir and dam inspections. Engineers and students alike report that working together is an extremely rewarding experience.

Board of Water Well Contractors

The Board of Water Well Contractors is responsible for licensing water well drillers, water well contractors, and monitoring well constructors. The board, which is attached to DNRC for administrative purposes, establishes water well construction standards and enforcement and training procedures. Composed of five members, the board consists of one technical advisor/hydrogeologist appointed by MBMG, two licensed Montana water well contractors appointed by the governor, one member appointed by the DNRC director, and one member appointed by the DEQ director. Each member serves a three-year term. Current board members are:

Pat Byrne, Chair
Great Falls
Well Driller

Laurence Siroky, Vice-Chair
Helena
DNRC

Robert N. Bergantino
Butte
MBMG

Eric Regensburger
Helena
DEQ

Kevin Haggerty
Bozeman
Well Driller

Licensing

During FY 2001, 272 people were licensed in three categories: water well contractors, monitoring well constructors, and water well drillers. Six of these were new licensees. Fifteen former licensees did not renew their licenses.

Complaints and Investigations

This year, 53 complaints were received out of 120 initial inquiries. Eighteen of the complaints were investigated for violations. Four faulty wells were repaired by the licensees without board action. The board ordered that two wells be repaired. One licensee was placed on probation. One unlicensed driller was prosecuted under the misdemeanor rules.

Public Awareness/Education

The Board of Water Well Contractors and the Montana Environmental Training Center held 12 continuing education classes and approved six programs by suppliers and manufacturers for continuing education credit.

A newsletter, *Well Developments*, is published and distributed to license holders and other interested persons.

Floodplain Management

The Floodplain Management Section is responsible for the oversight of 125 locally administered floodplain management programs throughout Montana. The primary goal of the program is to reduce the loss of life and structural property through wise floodplain development. The secondary goals are to reduce the loss of functional floodplains and reduce the amount of erosion of stream banks due to unwise floodplain development.

Flood Mitigation Assistance Program

The floodplain program manager coordinated the Flood Mitigation Assistance Program in Montana. The primary purpose of this program is to relocate structures out of the 100-year floodplain. The secondary purpose is to elevate structures to 2 feet above the base flood elevation. Structural projects will be greatly limited based upon the type of project, location, and a cost/benefit comparison with other alternatives. The overall goal is to reduce flood insurance expenditures in the long run.

For FY 2001, the program received approximately $10,000 for planning grants, $10,000 for technical assistance, and $95,000 for projects. Because not enough applications for projects were received to utilize the project money for FY 2001, the monies were returned to the Federal Emergency Management Agency (FEMA) for other states to use. A planning grant was awarded to Powell County, which in turn developed a flood hazard mitigation plan for the City of Deer Lodge. Also, a grant was awarded to Sweet Grass County to develop a plan.

State Floodplain and Community Assistance Program

General technical and engineering assistance was given to local and state governments, private property owners, and engineering consulting firms. During FY 2001, the Floodplain Management Program sent out approximately 210 written responses to floodplain issues and concerns. Also, a total of 1,159 phone contacts were made during the fiscal year. Of that total, 46 percent provided technical assistance, and 7 percent required follow-up.

Floodplain Study Program

Floodplain management studies are ongoing in Cascade, Granite, Lewis and Clark, Missoula, Petroleum, Sanders, and Yellowstone Counties. Also, the floodplain program is working closely with the U.S. Army Corps of Engineers on flood studies in Glendive, Miles City, and Libby.

The Floodplain Management Program signed an agreement with FEMA to become a "Cooperating Technical Partner" for FY 2001 and received approximately $35,000 to conduct studies in Gallatin County.

Money allocated by the 1999 Legislature is being used for floodplain delineations. Grant Creek in Missoula County and the Gallatin River in east Gallatin County are currently being studied.

Public Awareness/Education

Staff provided support to the Upper Yellowstone Task Force.

The Association of Montana Floodplain Managers (AMFM) held its second annual conference in Billings, attended by approximately 65 people. The conference was a success and included people from numerous professions. The program manager was elected vice-chair of the association for the next year.

The program manager gave presentations at the AMFM Conference and at the fifth Annual Missouri River Conference in Great Falls.

Water Measurement Program

The purpose of the Water Measurement Program is to provide technical information and assistance in the measurement of surface water diversions. The program focuses on streams where dewatering causes conflicts between water users or impacts resources. Program staff continue to investigate streams for program inclusion.

Big Hole River

The Water Measurement Program continues to represent DNRC at watershed committee meetings and to provide snowpack and streamflow data to the committee. The Drought Management Plan devised by the committee will be implemented again this year because of low flows.

Program staff continue a hydrologic study of Big Lake Creek in the upper basin. The study will aid in determining the feasibility of creating a storage project. A report summarizing this study will be produced later this year.

Program staff analyzed various data and made a presentation comparing climatic and streamflow conditions in 1988 to those conditions in 2000. The presentation showed that efforts of the watershed committee have been very effective in preventing complete dewatering during times of extreme drought.

Jefferson River

The Water Measurement Program continues to work with the Jefferson River Watershed Council. The council has now hired a coordinator and is gathering autonomy. The Water Measurement Program and DFWP drafted a Drought Management Plan that was used last summer and will likely be used again this summer.

The Water Measurement Program installed recording stream gages at Waterloo Bridge (Jefferson River), High Road Bridge (Big Hole River), and the mouth of the Beaverhead River, and will collect and analyze the data. Additionally, the program continues to measure irrigation diversions and is conducting an efficiency study of Parrot Canal, which serves the largest, most senior water users in the system.

Program staff continue to take weekly readings of river gages and irrigation diversions and present them at weekly drought response meetings of the major water users.

Mill Creek

Measuring devices have been installed on the major diversions from this tributary of the Yellowstone River. Program staff maintain contact with the water users and with DFWP, which administers water leases on Mill Creek.

Musselshell River

Installation of measuring devices continues on Musselshell River diversions. Several water development grant applications were received requesting partial reimbursement for installation of headgates and measuring devices. The Lewistown Regional Office is assisting with these efforts.

Sweeney Creek

Sweeney Creek is located in the north end of the Bitterroot Valley. Water users experience conflicts because streamflows and irrigation diversions have never been quantified. The Water Measurement Program has installed and rated a staff gage on Sweeney Creek to help the water users monitor their supply. Measuring devices have also been inspected and rated, and a drawdown curve has been calculated for the wilderness reservoir that serves these water users. The curve is now used by the dam tender to manage outflows more effectively.

Rock Creek

Rock Creek is a tributary of the Big Hole River near Glen. There is considerable conflict between users during low water years. The Water Measurement Program has responded to this situation by installing and rating measuring devices on irrigation diversions and on Rock Creek at its mouth and at its entrance to the valley. Releases from a high elevation reservoir will be monitored so that water may be more effectively allocated.

Water Rights

The mission of the Water Rights Bureau is to ensure the orderly appropriation and beneficial use of Montana's waters. The two main programs are (1) adjudication, where the bureau assists the Water Court in identifying and evaluating pre-1973 water uses, and (2) new appropriations, which involve the administration and regulation of post-1973 water rights in Montana. In addition to operating the two programs, the Water Rights Bureau is directed by the Montana Constitution to maintain a centralized water right record system.

Water Right Records

The two types of records most accessed by the public and the staff are in microfiche and electronic formats. With the water right database accessible on the Internet, the electronic records are becoming the most popular.

Efforts continue to convert the water right database from an old mainframe system to a relational database. A vendor has been working with Water Rights Bureau staff to define the system and enhance the wide variety of water right information, forms, and data now available on the Internet at:

www.dnrc.state.mt.us/wrd/home.htm

The redesign of the water rights database will improve flexibility in information gathering and report generation, increase mapping capabilities, and improve customer access and service.

Adjudication

During FY 2001, 2,149 claims were examined in six of the eight Water Resources Division regional offices. Staff in these offices provided post-decree assistance to the Water Court. Regional office staff joined the court in working with hundreds of citizens to resolve issues and disputes on pre-1973 water use claims. Central and regional staff were also involved in preparing a summary report for Big Sandy Creek.

Figure 31 shows the status of the adjudication in Montana's basins. The Water Court issued a Preliminary Decree in April 2001 for the FWS Benton Lake National Wildlife Refuge Compact (see Figure 17 on page 72).

Staff from the Central Office, Bozeman Regional Office, Water Court, and Gallatin County District Court worked together to initiate and put into action the West Gallatin River Enforcement Project.

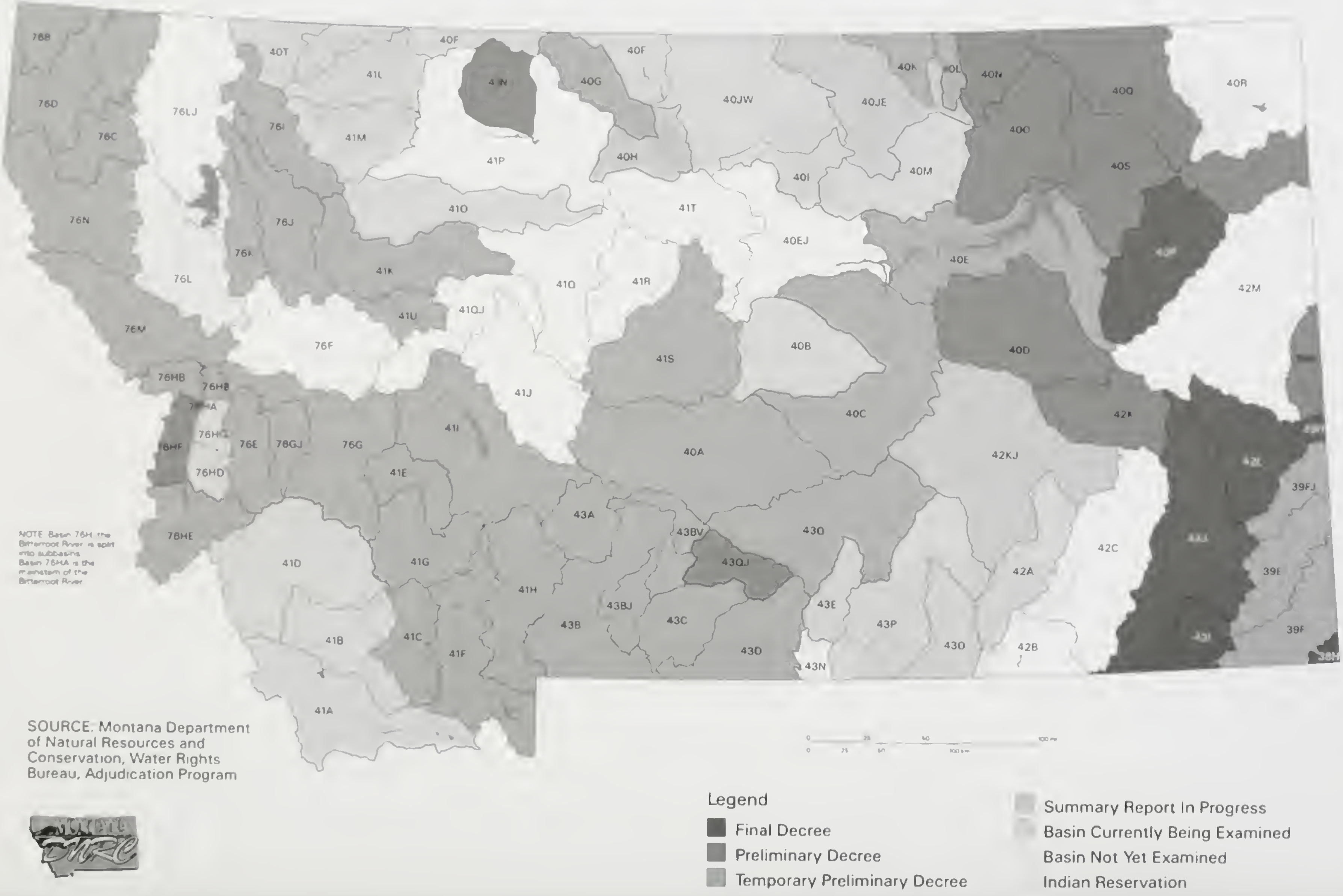
New Appropriations

Applications for various types of water rights are received each year. Table 35 shows the number and types of applications and notices received and processed during FY 2001. These water right applications vary in complexity depending on each region's water supply, area-specific competition for water, and the specific project request. Staff in the division's eight regional offices process these applications.

When applicants and objectors are unable to settle their differences, the file moves into the hearings process. During FY 2001, 27 hearings were held. This was a significant increase over last year, and, in general, permit and change applications are growing more complex and contentious.

Two controlled groundwater areas were established, one at the Paradise Valley CERCLA site near Plains, and one at the Idaho Pole site in Bozeman.

Figure 31
Montana General Adjudication
Status as of March 2001



NOTE: Basin 76H, the Bitterroot River, is split into subbasins. Basin 76HA is the mainstem of the Bitterroot River.

SOURCE: Montana Department of Natural Resources and Conservation, Water Rights Bureau, Adjudication Program

Table 35
Water Right Applications
in Fiscal Year 2001

	Received	Processed
Permits	221	165
Changes	181	129
Groundwater certificates	4,198	3,136
Water right ownership updates	4,971	4,066
Exempt water rights	166	171
Extensions	73	65
Stockwater permits	90	87
Project completion certifications	211	64

Regional Offices

The primary function of the division's eight regional offices is to work directly with the public in implementing programs for which the division is responsible. The regional offices play a large role in the accomplishments already discussed in this report concerning the division's programs. In addition, there are areas of special interest in the work of the regional offices over the past year that are highlighted here.

Billings

Coal Bed Methane

An issue of immediate and long-term concern in the Powder River basin in southeastern Montana and northeastern Wyoming is the extraction of coal bed methane. The current energy situation makes the recovery of this cost-effective alternative fuel attractive as a replacement for our dependence on foreign oil. The extraction process involves the drilling of wells and the removal of water in the coal bed to lower the pressures in the coals, allowing the methane to escape from the coal surface. A beneficial water use permit is required to use the discharge water. The Billings Regional Office has been working with cooperating agencies to protect the groundwater and alleviate concerns of landowners in the area regarding this process.

Yellowstone River CD Council

The Yellowstone River Conservation District Council was formed because of concerns of conservation districts along the Yellowstone River corridor. The council is focusing on bank stabilization, irrigation issues including water reservations, livestock issues, stream impairment, and water quality. The Billings Regional Office provides assistance to the council and its coordinator.

Bozeman

Water Right Decree Administration

The Water Court and District Court are preparing to use the Temporary Preliminary Decree on the West Gallatin River for enforcement purposes in 2002. Bozeman staff are assisting in research and resolution of issues for as smooth a transition as possible from the existing 1909 decree to the new decree. Staff are identifying ditch names for all points of diversion, clarifying authorized changes in point of diversion, mapping diversions using GIS, researching ownership, and addressing a host of other issues for the two courts.

Instream Flow Changes

There has been a resurgence of interest in the private sector to convert irrigation water rights to protectable instream flows. Two different property owners have submitted six applications involving six different streams. Two of the reasons are general fishery enhancement and protection of spawning tributaries for westslope cutthroat trout. Issues have involved addressing how the fishery is to be enhanced and developing water measurement plans as required by statute.

Glasgow

Water Conservation Drought Planning

The Glasgow Regional Office continues to help the Milk River Irrigation Districts implement effective water conservation plans. Water conservation planning is a joint effort under a cooperative agreement between USBR and DNRC. These conservation plans are primarily aimed at developing water budgets through increased water measurement efforts and were highly effective in reducing waste and improving equitable water delivery within the basin during recent drought conditions. The extensive water measurement data will be used to refine the Milk River HYDROSS Model used in the Fort Belknap compact negotiations and will be needed to improve future water delivery allocations.

Havre

Technical Assistance/Compact Negotiations

The Havre Regional Office provided considerable technical assistance to the Milk River International Alliance watershed group and the Milk River Joint Board of Control for the eight Milk River Irrigation Districts that make up the Milk River Irrigation Project. Informational meetings were sponsored by these groups to inform the basin water users of the status and development of the Fort Belknap Indian Reserved Water Rights Compact negotiations. In cooperation with the

Reserved Water Rights Compact Commission, regional office staff were instrumental in negotiating and finalizing agreements with water users on Peoples Creek as part of the Fort Belknap compact.

Helena

Working on a broad spectrum of water issues has been the goal of two of the Helena Regional Office's projects.

Flint Creek Dam Advisory Committee

The Flint Creek Dam Advisory Committee was created to advise the Granite County commissioners about water rights in Georgetown Lake/Flint Creek. During its first year of existence, the committee discussed and addressed the water use concerns of irrigators, recreationists, homeowners, fishery interests, and those studying the hydrology of the basin.

Missouri River Conservation Districts Council

The office's work with the Missouri River Conservation Districts Council has given staff a broad-based awareness of features of the Missouri River in Montana. Diverse concerns such as sturgeon reproduction, subdivision encroachment, power generation, and noxious weed transport all interrelate on the Missouri River.

Kalispell

Clark Fork Basin Closure

The basin closure of the Clark Fork River upstream of Noxon Rapids Dam ended February 28, 2001. The Kalispell office held meetings with Flathead Conservation District, the Flathead County commissioners, and local consultants to discuss the impacts of the closure deadline and the future of new appropriations in the area.

Permitting on the Flathead Reservation

A Montana Supreme Court decision issued December 31, 1999, changed permitting by the Kalispell Regional Office with regard to water right applications on the Flathead Reservation. Local concern, work on existing applications within the reservation, and trying to determine the implications of the ruling continued to present many challenges.

Lewistown

Barber Canal Rehabilitation

Deadman's Basin is a state-owned irrigation project serving more than 150 water users in the Musselshell River basin. In FY 2001, the Lewistown Regional Office provided construction inspection and quality control services for the rehabilitation of Barber Canal, the project's primary delivery canal. Major stages of construction included modification of the approach canal, reshaping of the canal, reconstruction of road crossings, replacement of an 80-foot drop structure, and installation of a new highway crossing. A total of nine concrete structures were replaced or modified. The capacity of Barber Canal was increased from 200 to 300 cfs, facilitating delivery of water to contract holders, decreasing erosion in the other main delivery artery, and improving water quality in the Musselshell River.

Missoula

Geographical Information System

The Missoula Regional Office continues to use GIS computer software to assist in the adjudication of water rights in the Bitterroot basin. Maps are generated that show claimed and verified irrigated acreages that can be overlaid by maps of the historically decreed water rights, plat maps, aerial photos, and USGS quad maps. Such "pictures" make the process of resolving objections more efficient.

Other

The Missoula staff provided monthly water rights orientation and research training for realtors and a water commissioners' training session in Hamilton. The staff continued to refine analysis under the Montana Environmental Policy Act (MEPA) for water right applications.

APPENDIX A

FUNDING INFORMATION CONCERNING THE RESOURCE INDEMNITY TAX AND THE COAL SEVERANCE TAX

APPENDIX A

FUNDING INFORMATION CONCERNING THE RESOURCE INDEMNITY TAX AND THE COAL SEVERANCE TAX

Resource Indemnity Tax

1. The **Resource Indemnity Groundwater Assessment Tax** (RIGWA) is a 0.5 percent tax of the gross value of the product of certain mineral mining (see Figure A-1). The tax was originally created in 1973. Mineral production, including coal, small metal mine production, talc, vermiculite, limestone, and other "*nonrenewable merchantable products extracted from the surface or subsurface of the state of Montana*" (MCA 15-38-103), is taxed. In addition to RIGWA proceeds, an 8.6 percent share of the **Oil and Gas Production Tax** is distributed to the **Resource Indemnity Tax Trust** (RIT Trust) and its associated accounts (MCA 15-36-324).

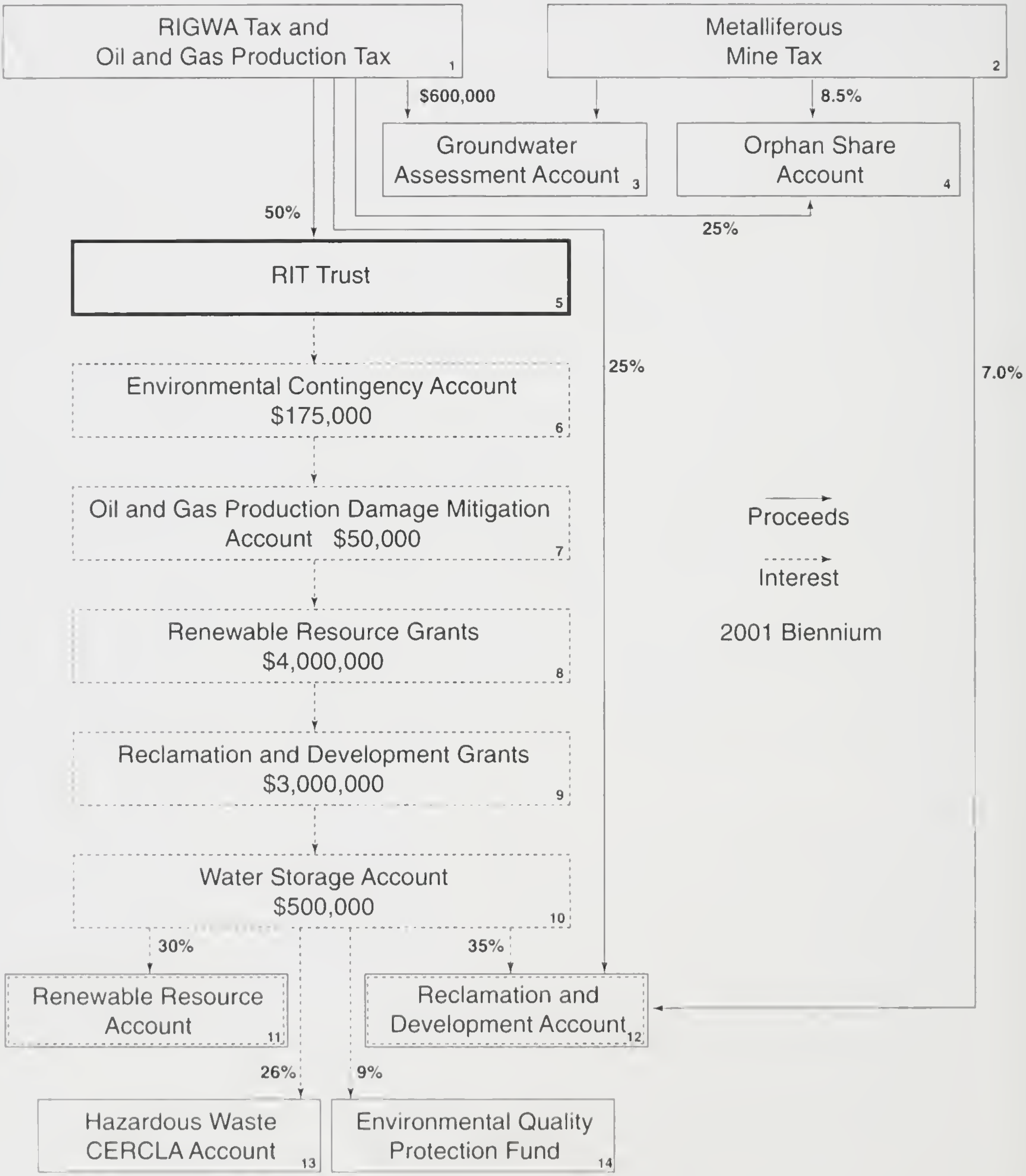
2. The **Metalliferous Mine Tax** is a tax on "*the annual gross value of product*" of all metal mine production or precious or semiprecious gem or stone production (MCA 15-37-101 et seq.). The tax rate is 1.81 percent of the annual gross value over $250,000 for concentrate shipped to a smelter, mill, or reduction work (MCA 15-37-103). For gold, silver, or any platinum-group metal that is dore, bullion, or matte and that is shipped to a refinery, the tax rate is 1.6 percent of the annual gross value over $250,000 (MCA 15-37-103).

3. The **Groundwater Assessment Account** was created in 1991 (MCA 85-2-901 et seq.). The purpose of the account is to fund a statewide Groundwater Assessment Program that will monitor the quantity and quality of the state's groundwater. The program is staffed by the Montana Bureau of Mines and Geology in Butte. An oversight committee reviews all expenditures, approves monitoring sites, prioritizes areas, coordinates information, and evaluates reports.

4. The **Orphan Share Account** was created in 1997 (MCA 75-10-743). The purpose of this fund is to provide funding for remediation and reclamation projects where the party responsible for the contamination no longer exists. The Montana Department of Environmental Quality is charged with administering the account. For projects where there are multiple parties, the state will participate in the negotiations to ensure that a fair allocation of the responsibilities for cleanup is made. In these cases a lead party will be responsible for proceeding with cleanup. All parties will participate financially, to the extent that they were responsible for the contamination. The portion of the contamination caused by parties that no longer exist is called the "*orphan share*," and these costs may be reimbursed if funds are available within the Orphan Share Account. If sufficient funds are not immediately available, reimbursements will be made over time as funds are deposited into the account.

5. The **Resource Indemnity Tax Trust** (RIT Trust) was created in 1973. No funds that are deposited into the trust can be spent until the total deposits exceed $100 million. This protection is provided in Article IX, Section 2 of

Figure A-1
Allocation of Resource Indemnity Tax
Proceeds and Interest



the Montana Constitution. Trust fund proceeds are invested, and the interest earnings are distributed to several natural resource programs.

6. The **Environmental Contingency Account** was created in 1985 (MCA 75-1-1101 et seq.). The governor has the authority to approve expenditures from this account to meet unanticipated public needs. Specifically, the statute limits projects to the following objectives: (1) to support renewable resource development projects in communities that face an emergency or imminent need for the services or to prevent the failure of a project; (2) to preserve vegetation, water, soil, fish, wildlife, or other renewable resources from an imminent physical threat or during an emergency, not including natural disasters or fire; (3) to respond to an emergency or imminent threat to persons, property, or the environment caused by mineral development; and (4) to fund the Environmental Quality Protection Fund. Each biennium $175,000 of the RIT Trust interest earnings is allocated to this account. The balance in this account cannot exceed $750,000.

7. The **Oil and Gas Production Damage Mitigation Account** was created in 1989 (MCA 85-2-161). The Board of Oil and Gas Conservation may authorize payment for the cost of properly plugging a well and reclaiming and/or restoring a drill site or other drilling or producing area damaged by oil and gas operations. The site must be abandoned, and the responsible person either cannot be identified or refuses to correct the problem. Each biennium $50,000 of the RIT Trust interest earnings is allocated to this account. The balance in this account cannot exceed $200,000.

8. **Renewable Resource Grants** receive $2 million in RIT Trust interest earnings per year, or $4 million for the biennium (MCA 85-1-604). The Renewable Resource Grant and Loan Program was created in 1993 by combining the Renewable Resource Development Program and the Water Development Program. The purpose of the grant program is to fund projects that conserve, develop, manage, and preserve water and other renewable resources. Projects include construction and rehabilitation of existing water supply systems and wastewater systems, educational efforts, feasibility studies, development of water storage, enhancement of renewable resources including recreation, reduction and advancement of agricultural chemical use, and improvement of water use efficiency (MCA 85-1-602).

9. The **Reclamation and Development Grants Program** was established in 1987. This program receives $1.5 million in RIT Trust interest earnings per year, or $3 million per biennium. The purposes of the program are: (1) to repair, reclaim, and mitigate environmental damage to public resources from nonrenewable resource extraction; and (2) to develop and ensure the quality of public resources for the benefit of all Montanans (MCA 90-2-1101). Projects have included plugging abandoned oil and gas wells, reclaiming mine sites, controlling nonpoint source pollution, researching new technologies for mine waste cleanup, conducting groundwater studies to determine the extent of contamination, and cleaning up pesticide contamination.

10. The **Water Storage Account** was established in 1991 (MCA 85-1-701 et seq.). The purpose of the account is to provide funding for projects that rehabilitate existing water storage facilities or develop new ones. Priority is given to high

hazard, unsafe dams. Each biennium $500,000 of RIT Trust interest earnings is deposited into this account.

11. The **Renewable Resource Grant and Loan Program** State Special Revenue Account receives 30 percent of the remaining interest earnings from the RIT Trust (MCA 85-1-601). This special revenue account also receives revenue from excess deposits in the Renewable Resource Debt Service Account and other administrative fees. The revenues are used to fund natural resource agency projects and administration, including the administration of the Renewable Resource Grant and Loan Program, the Flathead Basin Commission, the Water Court, MSU Northern, and the Montana State Library.

12. The **Reclamation and Development Grants Program** State Special Revenue Account receives 35 percent of the remaining RIT Trust interest earnings, 25 percent of the RIGWA Tax proceeds, and 7 percent of the Metalliferous Mine Tax (MCA 90-2-1101). The revenues are used to fund projects and administration of natural resource agencies, including the administration of the Reclamation and Development Grants Program, Montana State Library, Department of Environmental Quality, and Environmental Quality Council.

13. The **Hazardous Waste CERCLA Account** is administered by the Department of Environmental Quality (MCA 75-10-601 et seq.). CERCLA stands for the federal Comprehensive Environmental Response, Compensation, and Liability Act. This account receives 26 percent of the remaining RIT Trust interest earnings. The account was established in 1983 and is to be used to make payments on CERCLA bonds, implement the Montana Hazardous Waste Act, and provide assistance in remedial actions under CERCLA.

14. The **Environmental Quality Protection Fund** was established in 1985 and is administered by the Department of Environmental Quality (MCA 75-10-704 et seq.). This account receives 9 percent of the remaining RIT Trust interest earnings. The purpose of this account is to provide funding for remedial actions taken by the department in response to a release of hazardous or deleterious substances.

Coal Severance Tax

Within 30 days of the end of each calendar quarter, coal severance taxes are paid to the state, and 50 percent of these are deposited into the **Coal Severance Tax Trust Fund** by the Department of Revenue (see Figure A-2 and Table A-1). Six accounts are established within the trust: (1) the **Coal Severance Tax Bond Fund**, (2) the **School Bond Contingency Loan Fund**, (3) the **Treasure State Endowment Regional Water System Fund**, (4) the **Treasure State Endowment Fund**, (5) the **Coal Severance Tax Permanent Fund**, and (6) the **Coal Severance Tax Income Fund** (see Figure A-3).

1. Coal tax revenues that flow into the trust are initially deposited into the **Coal Severance Tax Bond Fund** (Bond Fund) and made available for payment of debt service on Coal Severance Tax Bonds (see footnotes 7, 8, and 9). The Department of Natural Resources and Conservation (DNRC) informs the Department of Revenue, during the first quarter of each state fiscal year, of the amount necessary to meet all principal and interest payments on bonds pay-

able from the Bond Fund for the next year (two semiannual payments). The Department of Revenue retains that amount in the Bond Fund.

2. The January 1992 Special Legislative Session passed an act creating the **Coal Severance Tax School Bond Contingency Loan Fund** (Contingency Loan Fund). A total of $25 million of school bonds was authorized to be issued and secured by this fund. For as long as there are any outstanding school district bonds secured by the Contingency Loan Fund, an amount equal to the next 12 months of principal and interest payments due on any school bonds is retained in the Contingency Loan Fund. DNRC provides written notice to the Department of Revenue in January of each year of the amount needed to secure school district bonds.

Figure A-2
Allocation of Coal Severance Tax

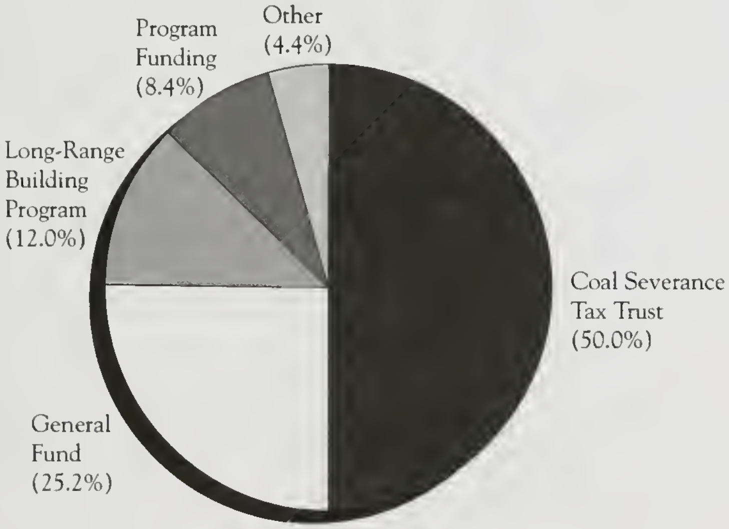


Table A-1
Allocation of Coal Severance Tax

	Tax Allocation	FY 2000 ($1,000)	FY 2001 ($1,000)
Coal Severance Tax Collections (Revenue Oversight Committee Estimates)		$35,470	$33,290
Coal Severance Tax Trust Fund	50.00%	$17,735	$16,645
General Fund	25.25%	8,956	8,406
Long-Range Building Program	12.00%	4,256	3,995
Program Funding	8.36%	2,965	2,783
Other			
Parks Acquisition and Management Trust	1.27%	450	423
Renewable Resource Loan Debt Service	0.95%	337	316
Cultural and Aesthetic Trust and Capitol Art	0.87%	309	289
Virginia and Nevada Cities	1.30%	462	433

3. The **Treasure State Endowment Regional Water System Fund** was established to provide state funding for regional water systems. Initially, the North Central Rocky Boy's Regional Water System and the Dry Prairie Fort Peck Regional Water System were authorized. During the first quarter of each state fiscal year, 25 percent of the amount in excess of what is retained in the Bond Fund and in the Contingency Loan Fund is deposited into the Regional Water System Fund.

4. The **Treasure State Endowment Fund** (Endowment Fund) was established when voters approved the ballot measure on June 2, 1992. During the first quarter of each state fiscal year, 75 percent of the amount in excess of what is retained in the Bond Fund and in the Contingency Loan Fund is deposited into the Endowment Fund. The Department of Commerce notifies the Department of Revenue when interest earnings are needed to fund local infrastructure projects. The Department of Revenue then transfers the interest earnings from the Endowment Fund into the **Treasure State Endowment Special Revenue Account** (Revenue Account). The Department of Commerce then approves the disbursement of funds to authorized local governments. Interest earnings not transferred to the Revenue Account for projects are retained in the Endowment Fund.

5. The **Coal Severance Tax Permanent Fund** (Permanent Fund) receives no new tax proceeds. The fund balance within the trust is invested by the Board of Investments. The earnings from the Permanent Fund are deposited into the General Fund. State law states that up to 25 percent of the Permanent Fund can be invested in the Montana economy.

6. Investment income on the deposits in the **Bond Fund**, the **Contingency Loan Fund**, and the **Permanent Fund** is periodically transferred into the **Coal Severance Tax Income Fund**. The entire balance in the Income Fund is transferred into the **General Fund** on a monthly basis.

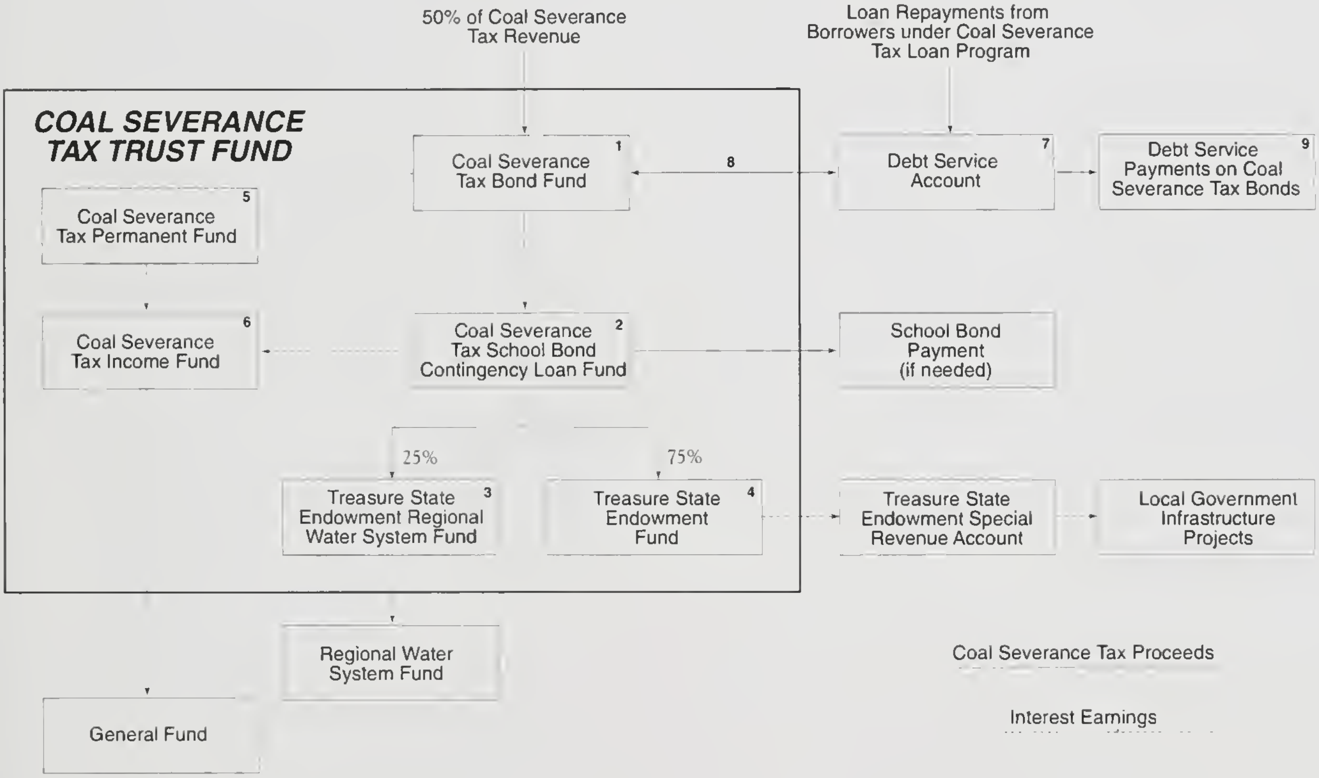
7. Under the Coal Severance Tax Loan Program, the state sells coal severance tax bonds and loans the proceeds to local governments for various infrastructure projects. The borrowers make semiannual or annual loan payments, which upon receipt are credited to a **Debt Service Account**. The terms of the loans vary, but generally involve an interest rate subsidy for the first five years of the loan followed by a direct pass-through of the interest rate on the state bonds for the remaining life of the loan. The loan program and debt service accounts are administered by DNRC.

8. Debt service payments on the bonds are due each June 1 and December 1. To the extent that funds on hand in the Debt Service Account are insufficient to pay principal and interest on the bonds when due, funds are transferred into the Debt Service Account from the Bond Fund.

   On January 1 of each year, funds are transferred into the Debt Service Account from the Bond Fund to the extent necessary to cause the balance in the Debt Service Account to equal one-twelfth of the next two ensuing semiannual debt service payments. DNRC provides written notice to the Department of Revenue if funds are needed to pay debt service or to make the required transfer on January 1. On January 1 of each year, DNRC also sweeps the Debt Service Account of funds in excess of one-twelfth of the next two ensuing semiannual debt service payments. The excess is returned to the Bond Fund in repayment of borrowed money, if necessary, or deposited into the Renewable Resource Grant and Loan Program Special Revenue Account.

9. On each June 1 and December 1, the state pays debt service on the bonds from amounts on hand in the Debt Service Account. Payments are made by DNRC.

Figure A-3
Coal Severance Tax Trust Fund
Flow of Funds Summary


50% of Coal Severance Tax Revenue
Loan Repayments from Borrowers under Coal Severance Tax Loan Program
COAL SEVERANCE TAX TRUST FUND
Coal Severance Tax Bond Fund 1
8
Debt Service Account 7
Debt Service Payments on Coal Severance Tax Bonds 9
Coal Severance Tax Permanent Fund 5
Coal Severance Tax Income Fund 6
Coal Severance Tax School Bond Contingency Loan Fund 2
School Bond Payment (if needed)
25%
75%
Treasure State Endowment Regional Water System Fund 3
Treasure State Endowment Fund 4
Treasure State Endowment Special Revenue Account
Local Government Infrastructure Projects
Regional Water System Fund
General Fund
Coal Severance Tax Proceeds
Interest Earnings

ABBREVIATIONS

AFY	acre-feet per year
AMFM	Association of Montana Floodplain Managers
AUM	animal unit month
BIA	Bureau of Indian Affairs, U.S. Department of the Interior
BLM	Bureau of Land Management, U.S. Department of the Interior
BMP	best management practice
BOGC	Board of Oil and Gas Conservation
CARDD	Conservation and Resource Development Division
CD	conservation district
CDB	Conservation Districts Bureau
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	cubic feet per second
CRP	Conservation Reserve Program
CSD	Centralized Services Division
DEQ	Montana Department of Environmental Quality
DFWP	Montana Department of Fish, Wildlife and Parks
DNRC	Montana Department of Natural Resources and Conservation
DWSRF	Drinking Water State Revolving Fund
EA	environmental assessment
EAP	emergency action plan
EDA	Economic Development Administration
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FMB	Forest Management Bureau
FWS	Fish and Wildlife Service, U.S. Department of the Interior
FY	fiscal year
GIS	geographic information system
HRA	Hazard Reduction Agreement
ISA	International Society of Arboriculture
ITB	Information Technology Bureau
MACD	Montana Association of Conservation Districts
MAPA	Montana Administrative Procedures Act
MBF	thousand board feet
MBMG	Montana Bureau of Mines and Geology
MCA	*Montana Code Annotated*
MCF	thousand cubic feet
MEPA	Montana Environmental Policy Act
MOU	Memorandum of Understanding
MPC	Montana Power Company
MSCA	Montana Salinity Control Association
NACD	National Association of Conservation Districts
NPS	nonpoint source
NRCS	Natural Resources Conservation Service, U.S. Department of Agriculture
RCAC	Resource Conservation Advisory Council
RC&D	resource conservation and development
RDB	Resource Development Bureau
RDGP	Reclamation and Development Grants Program
RIGWA	Resource Indemnity Groundwater Assessment Tax
RIT	Resource Indemnity Tax
RRGLP	Renewable Resource Grant and Loan Program
RWRCC	Reserved Water Rights Compact Commission
SEAT	single engine air tanker
SFLMP	State Forest Land Management Plan
SMZ	streamside management zone
SRF	State Revolving Fund
SUPJV	Seven-Up Pete Joint Venture
TMDL	total maximum daily load
TSEP	Treasure State Endowment Program
UIC	underground injection control
USBR	Bureau of Reclamation, U.S. Department of the Interior
USDA	U.S. Department of Agriculture
USFS	Forest Service, U.S. Department of Agriculture
USGS	Geological Survey, U.S. Department of the Interior
WMB	Water Management Bureau
WPCSRF	Water Pollution Control State Revolving Fund
WRD	Water Resources Division

Cover photo

Ninepipe Reservoir and Mission Mountains—DONNIE SEXTON, TRAVEL MONTANA

Inset photos

Learning about streams—LAURIE ZELLER

Lupines flourishing after fire—BRIAN LONG

Forest fire near Whitefish—TOM McISAAC

Irrigation headgate—BILL GREIMAN

Blackfoot River above Bonner—SHARON McLANE

Drilling in the Bears Paw Mountains—GARY KLOTZ

475 copies of this document were published at an estimated cost of $9.00 per copy. The total cost of $4,300.00 includes $4,275.00 for printing and $25.00 for distribution.

Persons with disabilities who need an alternative, accessible format of this document should contact DNRC at the address below, phone 406-444-2074, or fax 406-444-2684.

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
1625 Eleventh Avenue • P.O. Box 201601 • Helena, MT 59620-1601 • www.dnrc.state.mt.us